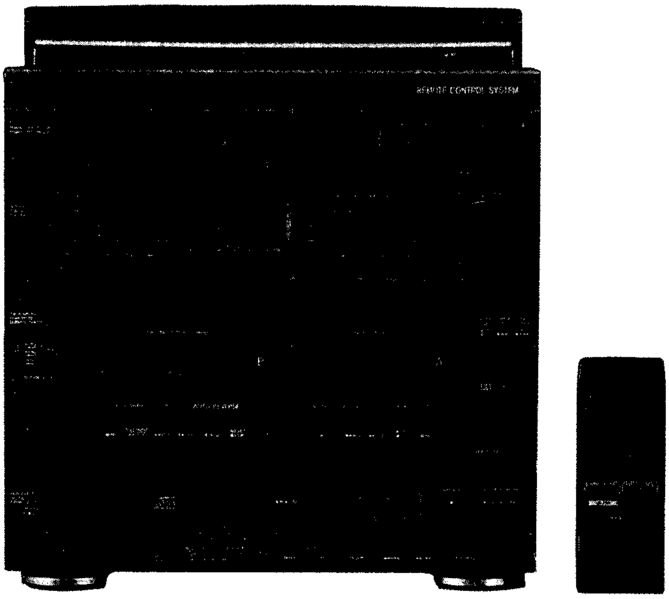
1876

SANYO

Service Manual

CD Stereo Sound System

DC-X802 (GERMANY)



Specifications

PRODUCT CODE No.
129 343 11

Tuner section

Frequency range	FM : 87.5 - 108 MHz MW : 522 - 1,611 kHz LW : 144 - 290 kHz

Turntable section

Drive system	Belt drive

Cassette decks section

Recording system	AC bias, 4-track stereo
Rewind and fast forward time	Approx. 120 sec. (C-60)

CD player section

Channels	2 channels
Frequency response	20 - 20,000 Hz
S/N ratio	85 dB
Channel separation	90 dB (1 kHz)
Distortion	0.12% (1 kHz)
Wow and flutter	Undetectable

General

Output power	25 W × 2 (at 8 ohms, 10% distortion)
Inputs	VIDEO : 47k ohms (280 mV)
Outputs	SPEAKERS : 8 ohms HEADPHONES : 8 ohms
Power requirements	AC : 230V, 50Hz
Dimensions(approx.)	360 (W) × 350 (D) × 395 (H) mm

RB-X802 Remote Controller

Power requirements	DC : 3V "R6 / AA / SUM - 3" battery × 2
Dimensions(approx.)	60 (W) × 18 (D) × 160 (H) mm

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ꟿ are trademarks of Dolby Laboratories Licensing Corporation.

Specification subject to change without notice.

REFERENCE No. WM-580600

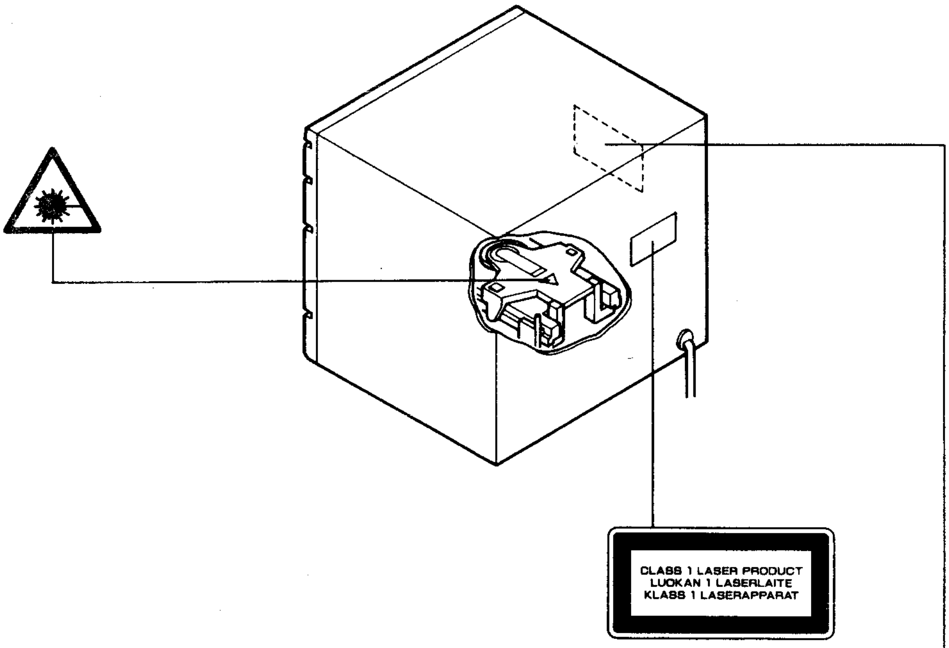
1876

LASER BEAM SAFETY PRECAUTIONS

Do not look directly at the laser beam coming from the pick-up or allow it to strike against your fingers, skin, etc.
Do not apply power if there is a broken part in the laser output section of the pick-up.

Structural Safety Interlock
This model has a disc chuck lever and top lid. This disc chuck lever and top lid prevent to expose the laser beam for users.

INVISIBLE LASER RADIATION EXPOSURE TO BEAM IS DANGEROUS CLASS 1 LASER PRODUCT
OUTPUT POWER : 0.6 mW MAX(Objection Lens)   WAVELENGTH : 790 nm



CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

ADVARSEL – USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDS ÆTTELSE FOR STRÅLING.

VARNING – OSYNLIG LASER STRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.

VORSICHT – UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.

VORO – AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

CAUTION - USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

ACHTUNG - WENN ANDERE ALS DIE HIER SPEZIFIZIERTEN BEDIENUNGS- ODER JUSTIEREINRICHTUNGEN BENÜTZT ODER ANDERE VERFAHRENS-WEISEN AUSGEFÜHRT WERDEN, KANN DIES ZU GEFÄHRLICHER STRAHLUNGSEXPOSITION FÜHREN.

ATTENTION - L'EMPLOI D'ORGANES DE COMMANDE OU DE RÉGLAGE, OU L'EXÉCUTION DE PROCÉDURES, AUTRES QUE CEUX SPÉCIFIÉS DANS LE MODE D'EMPLOI, PEUT PROVOQUER UNE EXPOSITION DANGEREUSE AU RAYONNEMENT.

OPGELET - HET GEBRUIK VAN REGELAARS OF HET MAKEN VAN AFSTELLINGEN E.D. DIE NIET IN DEZE GEBRUIKSAANWIJZING ZIJN BESCHREVEN KAN LEIDEN TOT SCHADELIJKE STRALINGEN.

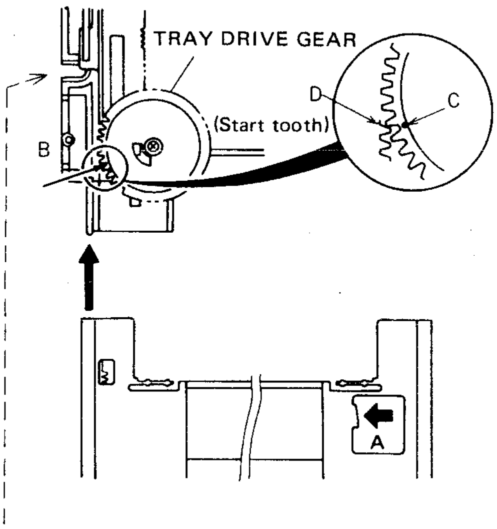
VARNING! OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN VAD SOM BESKEIV I DENNA BRUKSANVISNING, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

CAUTELA - L'USO DI COMANDI, AGGIUSTAMENTI O PROCEDIMENTI DIVERSO DA QUELLO QUI SPECIFICATO PUÒ DAR LUOGO AD ESPOSIZIONE A RADIAZIONI PERICOLOSE.

VAROITUS! LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

DISASSEMBLY (CD MECHANISM)

1. Removal of DISC TRAY



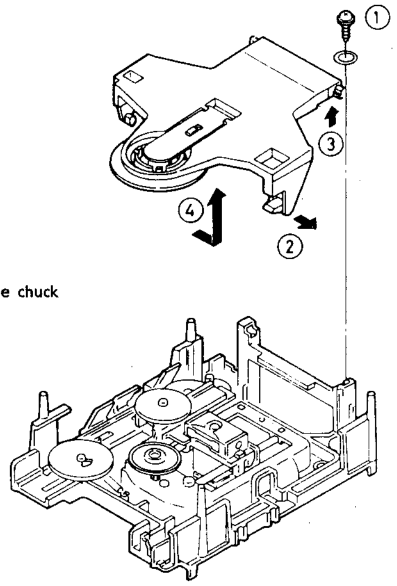
a. Drive the mechanism to open end. OPEN / CLOSE Switch : Push ON
b. Pull the TRAY off the mechanism. (Push the A rib of the TRAY to the direction of arrow and free from chassis rib.)
c. Turn the PICK-UP drive gear (under chucking lever) slowly manual forward clockwise and move the slide to the front end.
d. Match the guide groove of TRAY to the chassis guide and insert to the direction of arrow.
e. Insert the TRAY to the mechanism after to match the C (tooth bottom) to the D (starting tooth) of TRAY rack. Then complete the close motion by OPEN / CLOSE Switch : Push ON.

Note : Never turn the TRAY drive gear by hand directly in the all mechanism adjustment so that you will not wound the teeth of the TRAY drive gear.

(If the left slide obstructs the special screw, turn the PICK-UP drive gear a little.)

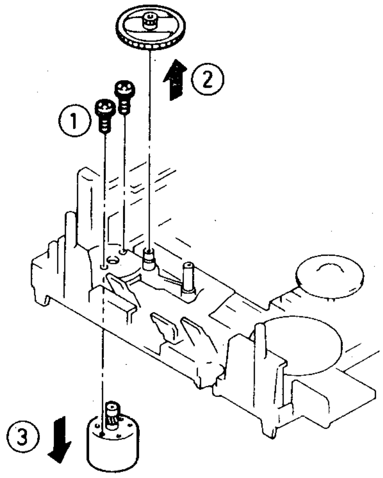
2. Removal of CD Mechanism

a. Removal of the disc chuck lever

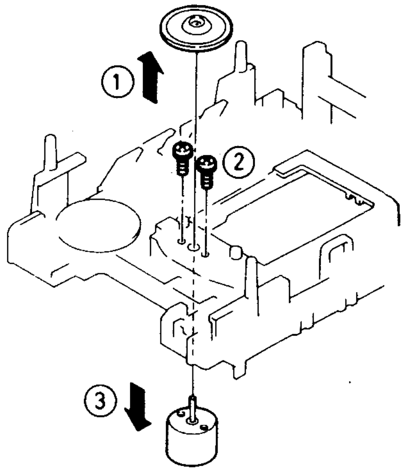


Pull the flange ② of the chuck lever to the outer side.

b. Removal of the sled motor



c. Removal of the spindle motor



- First, prepare the new turn-table and new special washer for replacement. And prepare dial-type calipers. The removed turn-table will be deformed by the heat of the soldering iron, and cannot be reused.

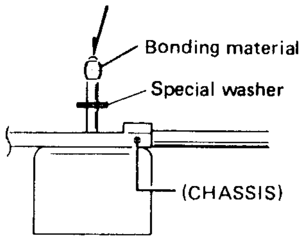
a. The attached bonding material can be dissolved by using a 60W soldering iron to heat the shaft at the lower part of the turn-table for about one minute.
b. The turn-table can then be removed from the shaft by very carefully applying force upward at the center of the lower surface of the turn-table.
c. Remove the two screw and remove the spindle motor.
d. Attach the special washer to the spindle motor.
e. Apply a small amount of a mixture(50 : 50) of the "Three Bond 2001" and "2105F" bonding materials to the motor's shaft.

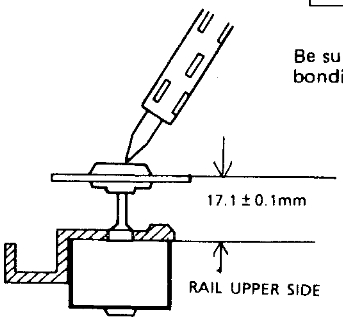
DISASSEMBLY (CD MECHANISM)

f. Install the turn-table as shown in the figure.

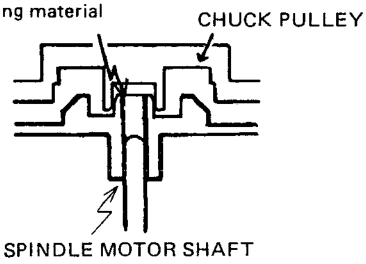
g. Secure the turn-table by pressing gently. Be sure to wipe away (by using a piece of cloth, or similar material) any bonding material coming out of the hole.

Don't attached bonding material at the top of shaft

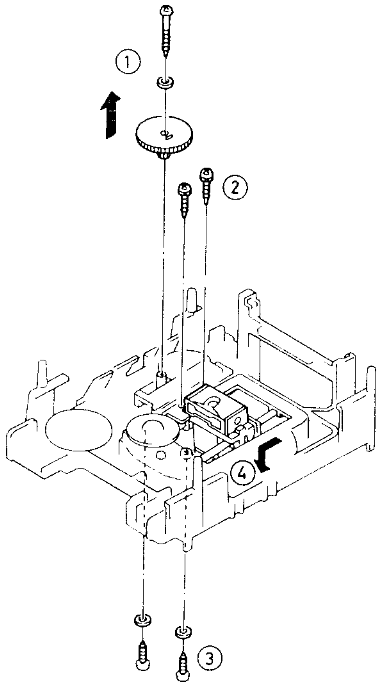

Bonding material
Special washer
(CHASSIS)


17.1 ± 0.1mm
RAIL UPPER SIDE

Be sure to wipe away the bonding material


CHUCK PULLEY
SPINDLE MOTOR SHAFT

d. Removal of the Pick-up



e. Replacement and lubrication of the Pick-up

a. Before replacement of the pick-up, be sure to carefully read the section regarding the pick-up when the unit is moved or transported.

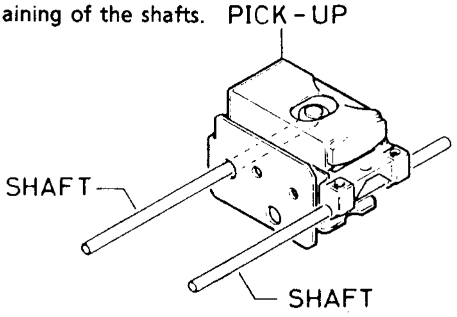
b. Remove the two pick-up rails with care fixing the 2 latches with any way driver from bottom of chassis.

c. When replacing the pick-up, carefully wipe away the grease from the shafts on which the pick-up is mounted.

d. Replace the pick-up.

e. Move the pick-up to the position at the left side, and then apply a coating of floil (G-474B) to the shafts.

f. Move the pick-up to the right side and apply floil to the remaining of the shafts.


PICK-UP
SHAFT
SHAFT

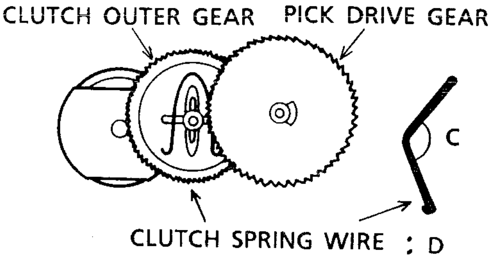
f. Inspection of slip current

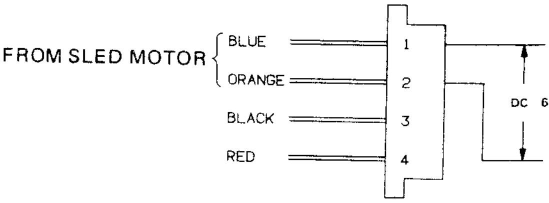
Stop the TRAY on opening by force, check the slip mechanism (next gear assembly of motor)

a. Confirm that the inner gear stops and outer gear and motor's gear rotate.

b. Confirm that the scale of control meter is 225mV ~ 275mV.

c. Check this slip inspection on DC 6.0V.


CLUTCH OUTER GEAR
PICK DRIVE GEAR
C
CLUTCH SPRING WIRE : D


FROM SLED MOTOR
BLUE
ORANGE
BLACK
RED
1
2
3
4
DC 6V

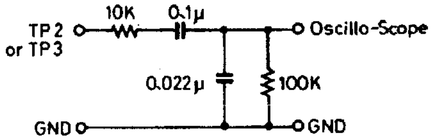
* In the case of that DC current scale don't display 225mV ~ 275mV, adjust to below items.
read current value : A · amount of the grease (Silicon G333) : B
bender angle of the spring wire D : C
A > 275mV → increase the angle C or decrease B.
A < 225mV → decrease the angle C or increase B.

CD ADJUSTMENT

Electrical Adjustment

So far we have presented explanations regarding compact disc player handling, notes prior to repair, handling the pick-up and disassembly of the unit. Be sure to carefully read these instructions before making any adjustments.

Note : Test disc are subject to change without notice.


10K
0.1μ
TP2
or TP3
Oscillo-Scope
0.022μ
100K
GND
GND

BAND PASS FILTER

Test discs required for adjustments and checks

No.	Destination	Description (manufacturer)
1	414 245-2	for Demonstration (Polygram)

Preparations for Adjustments

Measuring instruments, tools and filter

(1) Test disc. : YEDS 17, -10dB, 1KHz (Sony)
(2) Oscilloscope : SS5711 (10MHz or dual phenomenon)
or Memoryscope : DSS6521 (Storagescope)
(3) Digital voltmeter (Input impedance 1M ohm or more)
(4) Oscillator (400Hz, 300mV RMS)
(5) Frequency Counter (5MHz ; or more)
(6) Screw drivers (non-metalic) for adjustments
(7) Filter
(8) DC Power supply : 15V, 1A Class

Notes : a. The adjustments can be using the equipment produced by other manufactures provided that the performance of that equipment corresponds to that of the above listed models.
b. Use a 10 : 1 probe for observing signals on the oscilloscope and storage scope.
c. Test disc is subject change without notice.

1. Initial set up

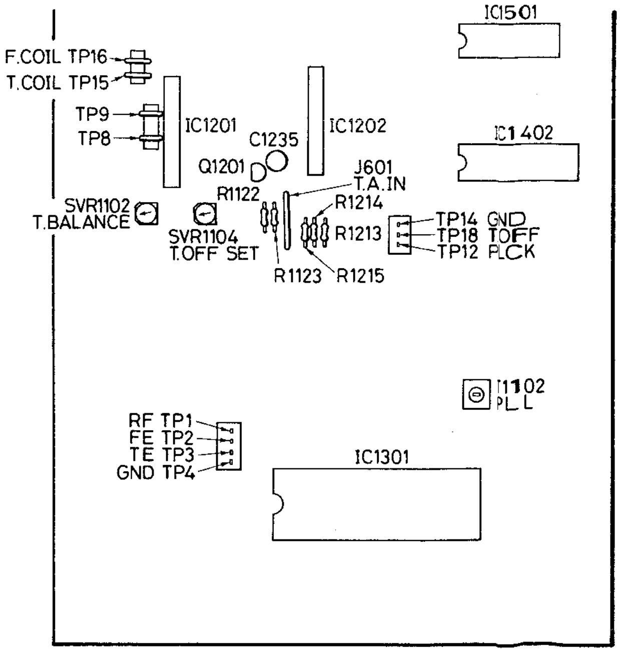
Set the initial position of adjustment controls as shown in figure below.

2. Free-run Frequency adjustment(PLL-VCO)

1. Connect the frequency counter to TP12(H), TP14(GND).
2. Turn on the power of the unit.
3. Adjust T1102 so that the frequency counter shows 4.30 ±0.01MHz.
   - if the adjustment is imperfect, get the long seek time, not read TOC, not sound. in the worst case become high speed turning, reveres turning and it may wound the disc.

3. Tracking Offset Adjustment (adjustment location : SVR1104)

1. Connect the oscilloscope to TP15 ⊕(T.Coil), TP4 (GND), and shot TP18(T .Off), TP14(GND).
2. Turn on the power of the unit.
3. Adjust SVR1104 so that the DC voltage at TP15 is 60mV ± 20mV.
   - If the adjustment is imperfect, become inferior playability can not playback the disc.


IC1501
F.COIL TP16
T.COIL TP15
TP9
TP8
IC1201
C1235
IC1202
IC1402
Q1201
J601
T.A.IN
R1122
SVR1102
T.BALANCE
R1214
SVR1104
T.OFF SET
R1213
TP14 GND
TP18 TOFF
TP12 PLCK
R1123
R1215
T1102
PLL
RF TP1
FE TP2
TE TP3
GND TP4
IC1301

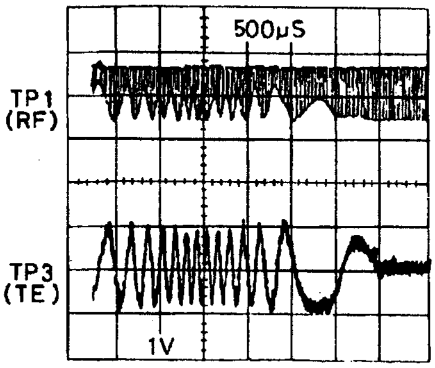
Note : Set the SVR's to the position as shown prior to the adjustment.

CD ADJUSTMENT

4. Tracking Balance Adjustment (SVR1102)

1. Connect the oscilloscope to TP3 (TE) and TP4 (GND.).
2. Turn on the power of the unit. Insert test disc.
3. Press the play button.
4. Continuously press the forward search ▸▸ or ▸▸ button to do it
5. Adjust SVR1102 so that the TE (Tracking Error) signal waveform of TP3 on the oscilloscope is vertically symmetrical relative to 0V. (See figure below)

*If the adjustment is imperfect, become run away the spindle motor(pick-up sending motor), inferior playability.

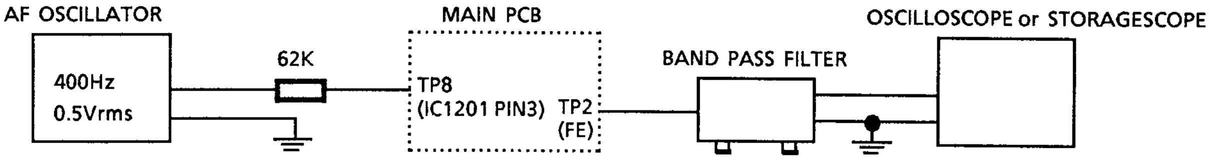


◀◀SEARCH

5. FOCUS Gain CONFIRMATION

1. Connect the storage scope to TP2 (F.E) by the Band pass filter. (See BPF Figure)
2. Turn on the power of the unit.
3. play the test disc.
4. Set the output of AF oscillator to 400Hz, 0.5V rms and connect to TP8 (IC1201 pin 3) by resistor 62k ohm.
5. Confirm so that the voltage of F.E signal waveform on the storage scope is 1V p-p, ±3db by through BPF.

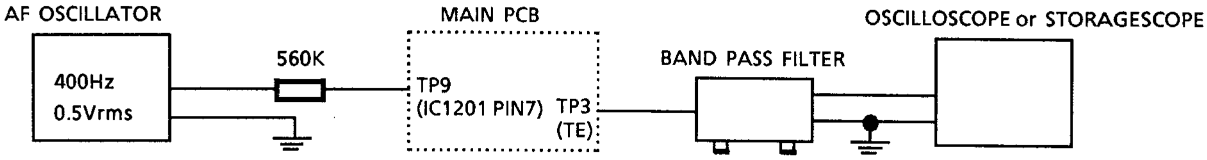
*If this CONFIRMATION is imperfect, become weak the mechanical shock, inferior playability, and can not playback the Disc.


AF OSCILLATOR
400Hz
0.5Vrms
62K
MAIN PCB
TP8
(IC1201 PIN3)
TP2
(FE)
BAND PASS FILTER
OSCILLOSCOPE or STORAGESCOPE

6. Tracking Gain CONFIRMATION

1. Connect the storage scope to TP3 (T.E) by the Band pass filter. (See BPF Figure).
2. Turn on the power of the unit.
3. playback the test disc.
4. Set the output of AF oscillator to 400Hz, 0.5V rms and connect to TP9 (IC1201 pin 7) by resistor 560k ohm.
5. Confirm so that the voltage of T.E signal waveform on the storagescope is 1V p-p, ±3db by through BPF.

*If this CONFIRMATION is imperfect, become weak the mechanical shock, inferior playability, and can not playback the Disc.


AF OSCILLATOR
400Hz
0.5Vrms
560K
MAIN PCB
TP9
(IC1201 PIN7)
TP3
(TE)
BAND PASS FILTER
OSCILLOSCOPE or STORAGESCOPE

TUNER ADJUSTMENT

- Use a plastic screwdriver for adjustment.
- Adjust the intermediate frequency of AM and FM to the frequency of ceramic filter.

RF Level : 75 ohm, Open SG voltage dBμV

(1) FM BAND

Antenna : 75 ohm Unbalanced - Direct Modulation : 1kHz, Dev. : ±22.5kHz (mono/stereo), ±6.75kHz(pilot)

STEP	ITEMS		FREQUENCY INDICATED POSITION	INPUT CONDITIONS		OUTPUT CONDITIONS		ADJUSTING PARTS	STANDARDS
				MEASURING INSTRUCTIONS	CONNECTIONS	MEASURING INSTRUCTIONS	CONNECTIONS		
1	IF	V-Curve	98.0 MHz	FM Sweep Generator (10.7MHz Non Modulation Small Input)	TP103(H) TP102(E)	FM Sweep Generator	V: TP203(H)	T201	Max.
		S-Curve					S: TP204(H) TP205(E)	T202	Symmetrical Wave Max.
2	Tuning Cover	Low	87.5 MHz	-----	----	Digital Voltmeter	TP401(H) TP102(E)	L104	1.25±0.05V
		High	108.0 MHz					---	Confirm voltage below 8.5V
3	Tracking	Low	90.0 MHz	FM-SG(9dB)	FM ANT Terminal	VTVM Oscilloscope	Tuner Out (L / R & E)	L101 L102	Max.
		High	106.0 MHz					CT101	
4	IF S-Curve (0V)		98.0 MHz	FM-SG(66dB)	FM ANT Terminal	Digital Voltmeter	TP201(H) #TP202(E)	T202	0±0.05V
5	SD (Auto stop sensitivity)		98.0 MHz	FM-SG(26dB)	FM ANT Terminal	Digital Voltmeter	TP207(H) TP205(E)	SVR201	##SD Output low
6	###VCO (19 kHz)		98.0 MHz	FM-SG(66dB) (Non Modulation)	FM ANT Terminal	Frequency Counter	TP301(H) TP302(E)	SVR302	19±0.05kHz

#: TP202 is no earth point. Be careful so that digital voltmeter earth (including case) may not be in contact with other measuring equipments earth. (including case)

##: Rotate SVR201 to less than 4V. Adjust and confirm SG attenuator to be Hi (about 4V) at -1dB and low(below 1V) at +1 to +3dB.

###: Use IHF filter adjusted from 200~15000 Hz BPF. Set the Mode switch to STEREO position.

(2) MW BAND

Antenna : IRE Loop, Standard output : 100dB, Modulation : 1kHz 30%

STEP	ITEMS		FREQUENCY INDICATED POSITION	INPUT CONDITIONS		OUTPUT CONDITIONS		ADJUSTING PARTS	STANDARDS
				MEASURING INSTRUCTIONS	CONNECTIONS	MEASURING INSTRUCTIONS	CONNECTIONS		
1	IF		999 kHz	AM Sweep Generator (459kHz Non Modulation)	TP151(H) TP152(E)	AM Sweep Generator	TP206(H) TP205(E)	X205	Max.
2	Tuning Cover	Low	522 kHz	-----	----	Digital Voltmeter	TP401(H) TP102(E)	L151	1.4±0.03V
		High	1611 kHz					CT151	7.8±0.3V
3	Tracking	Low	603 kHz	AM-SG(78dB)	IRE Loop Ant.	VTVM Oscilloscope	Tuner Out (L / R & E)	L152	Max.
		High	1404 kHz					CT152	
4	SD (Auto stop sensitivity)		999 kHz	AM-SG(85dB)	IRE Loop Ant.	Digital Voltmeter	TP207(H) TP205(E)	SVR202	#SD Output low

#: Rotate SVR202 to less than 4V. Adjust and confirm SG attenuator to be Hi (about 4V) at -1dB and low(below 1V) at +1 to +3dB.
This must be after FM-SD adjustment. When rotating SVR201 after AM adjustment, make adjustment again.

TUNER ADJUSTMENT

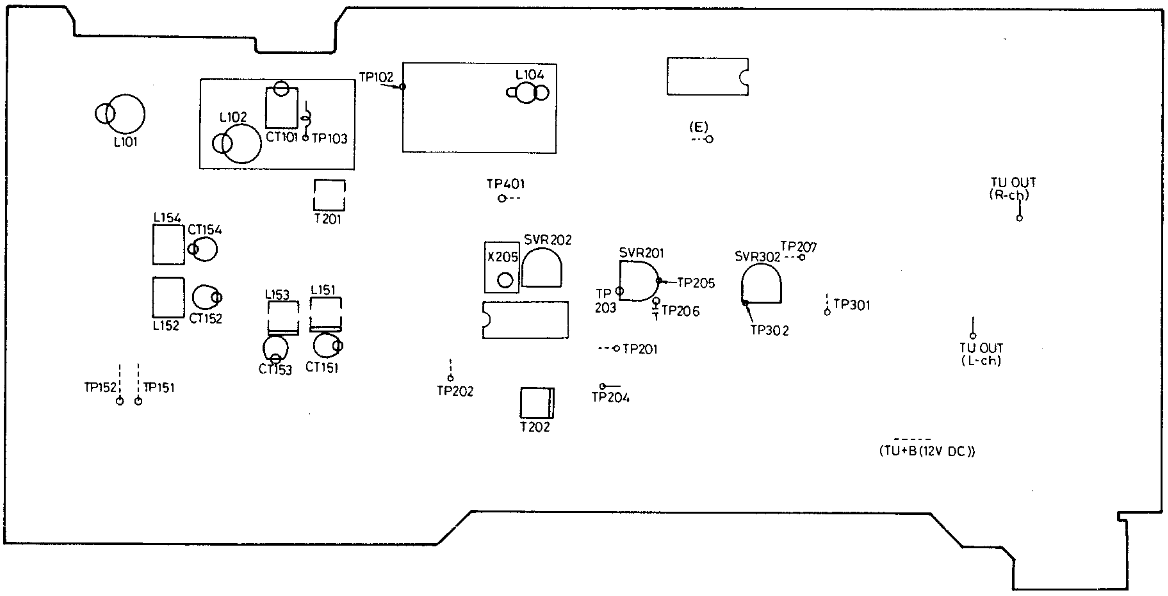
(3) LW BAND

Antenna : IRE Loop, Standard modulation : 400Hz 30%

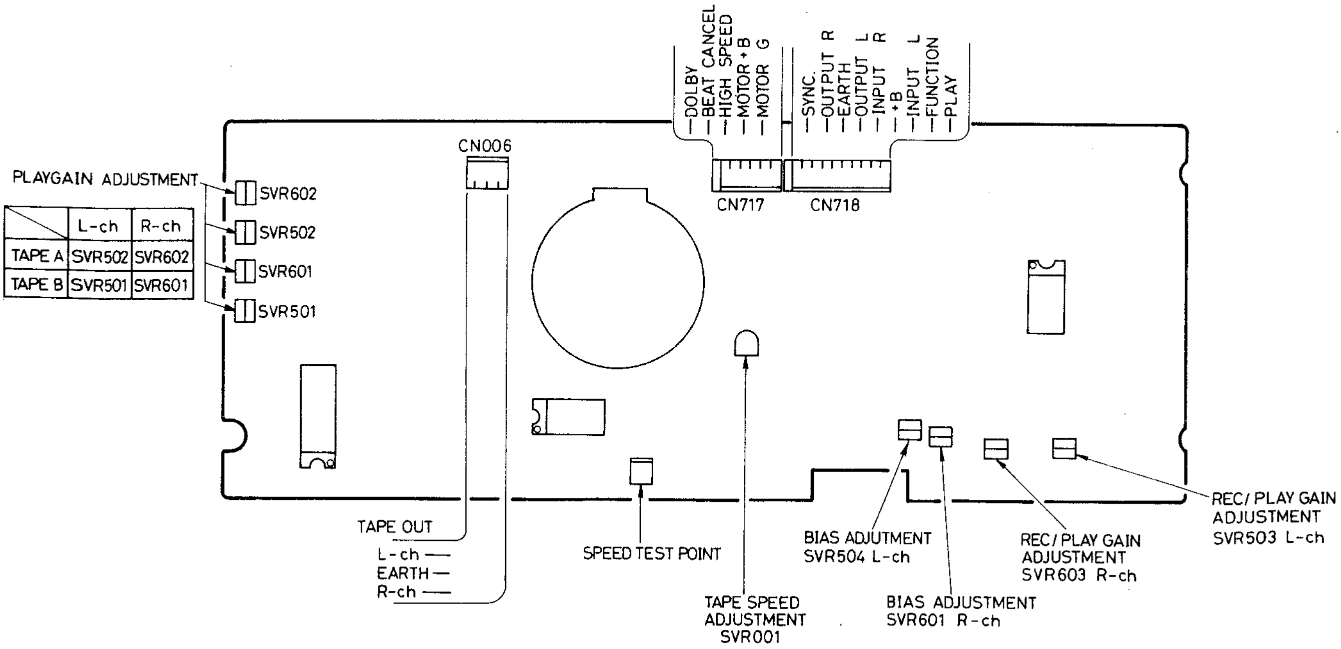
STEP	ITEMS		FREQUENCY INDICATED POSITION	INPUT CONDITIONS		OUTPUT CONDITIONS		ADJUSTING PARTS	STANDARDS
				MEASURING INSTRUCTIONS	CONNECTIONS	MEASURING INSTRUCTIONS	CONNECTIONS		
2	Tuning Cover	Low	144 kHz	----	---	Digital Voltmeter	TP401(H)	L153	1.6 ± 0.03V
		High	290 kHz				TP102(E)	CT153	7.0 ± 0.05V
3	Tracking	Low	162 kHz	AM-SG(85dB)	IRE Loop Ant.	VTVM Oscilloscope	Tuner Out (L/R & E)	L154	Max.
		High	279 kHz					CT154	

PARTS LOCATIONS

<TUNER>


TP102
L104
L101
L102
CT101
TP103
(E)
TP401
TU OUT (R-ch)
L154
CT154
T201
SVR202
X205
SVR201
SVR302
TP207
TP205
TP 203
TP206
TP302
TP301
L153
L151
L152
CT152
CT153
CT151
TP201
TU OUT (L-ch)
TP152
TP151
TP202
TP204
T202
(TU+B(12V DC))

<DECK>


DOLBY
BEAT CANCEL
HIGH SPEED
MOTOR +B
MOTOR G
SYNC.
OUTPUT R
EARTH
OUTPUT L
INPUT R
+B
INPUT L
FUNCTION
PLAY
CN006
CN717
CN718
PLAYGAIN ADJUSTMENT
SVR602
SVR502
SVR601
SVR501
TAPE OUT
L-ch
EARTH
R-ch
SPEED TEST POINT
TAPE SPEED ADJUSTMENT SVR001
BIAS ADJUTMENT SVR504 L-ch
BIAS ADJUSTMENT SVR601 R-ch
REC/PLAY GAIN ADJUSTMENT SVR603 R-ch
REC/PLAY GAIN ADJUSTMENT SVR503 L-ch

	L-ch	R-ch
TAPE A	SVR502	SVR602
TAPE B	SVR501	SVR601

ADJUSTMENT OF DECK & MECHANISM TORQUE

Amplifier Adjustment

	ITEM	DECK	TEST TAPE	INPUT	DOLBY SW	OUTPUT	ADJUST POINT	REMARKS
1	Head Azimuth	TAPE A TAPE B	VTT-738	-	OFF	TAPE OUT	Azimuth Screw	Adjust so as 10kHz output become maximum.
2	Playback Level	TAPE A	TCC-130	-	OFF	TAPE OUT	SVR502 SVR602	Adjust so as TAPE OUT output become 0.54V.
		TAPE B					SVR501 SVR601	
3	Rec / Play Level	TAPE B	AC-224	1kHz -13dB	OFF	TAPE OUT	SVR503 SVR603	Adjust SVR so as Monitor output = R/P Level = 0 ± 1dB.
4	Rec / Play Frequency	TAPE B	AC-224	1kHz / 10kHz -20dB	ON	TAPE OUT	SVR504 SVR604	Adjust to obtain same output of 1kHz and 10kHz.

Input terminal : VIDEO IN

Note.
1. Perform BIAS alignment by SVR504·604 so as No.3 satisfy spec of all item. Perform output alignment by SVR503·603.
2. During alignment, measurement Beat cancel SW is at 1 condition fundamentally, cfm. R/P frequency characteristic, dolby effect also by 2 condition, when ship out set SW to 1 position.
3. Fix to MAIN VR the position that SP output playing VTT722 is about 2.83V-10dB.(2.83V ≈ 1W output)

Tape Speed Adjustment

STEP	SPEED	DECK	TEST TAPE	SVR	TAPE COUNTER	REMARKS
1	Normal	TAPE A	MTT-111N etc. : 3000 Hz	SVR001	3000 ± 5Hz	Memorize the tape speed on counter.
2	High	TAPE A	TCW-211 etc. : 1500 Hz		3000 ± 10%	

Connect the tape-speed(frequency) counter to TAPE OUT on P.C.Board.
Confirm that the Tape speed of TAPE A is in 3000 ± 10% by the TCW-211 test tape.

1. Set the test tape(MTT-111) to "TAPE A" deck. (play only mechanism)
2. Adjustment to obtain the tape speed counter at play of step 1.

Note : Set the test tape near the tape end.

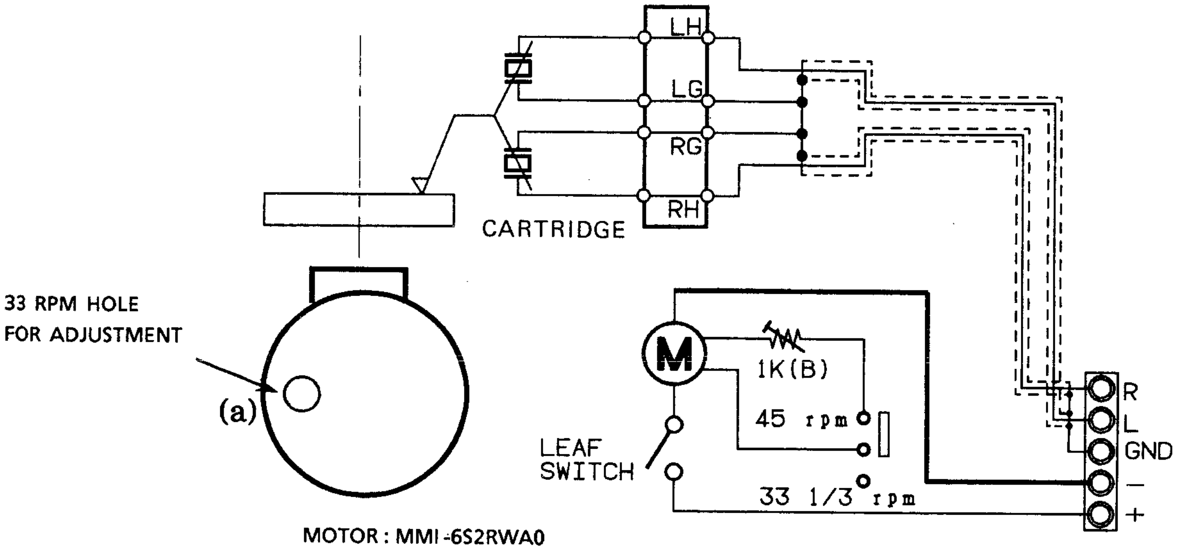
High speed adjustment should be made after normal speed adjustment.

1. Set the Blank tape(C-60) to "TAPE B" deck. (record/play mechanism)
2. Set the test tape (TCW-211) to "TAPE A" deck.
3. Set the Dubbing speed "HIGH".
4. Confirm the indication of the tape speed counter within 2 second after push the PLAY(TAPE A) and REC. (TAPE B) button.

Torque Measurements

DECK	ITEM	TAKE-UP TORQUE	BACK TENSION	TAPE TENSION
TAPE "A"	Test cassette	PLAY : TW2111A F.FWD / REW : TW2231	PLAY : TW211A	Driving power cassette: TW-2412
	PLAY	30 ~ 60gr.cm	2.0 ~ 4.5gr.cm	
	F.FWD	55 ~ 120gr.cm	-	>60g
	REW	55 ~ 120gr.cm	-	
TAPE "B"	Test cassette	PLAY : TW2111A(FWD) PLAY : TW2121A(REV) F.FWD / REW : TW2231	PLAY : TW211A(FWD) PLAY : TW2121A(REV)	Driving power cassette: TW-2412(FWD) TW-2422(REV)
	PLAY	30 ~ 60gr.cm	2 ~ 4.5gr.cm	
	F.FWD	70 ~ 130gr.cm	-	>80g
	REW	70 ~ 130gr.cm	-	

SCHEMATIC DIAGRAM(TURN TABLE)


LH
LG
RG
RH
CARTRIDGE
33 RPM HOLE
FOR ADJUSTMENT
(a)
M
1K(B)
45 rpm
LEAF
SWITCH
33 1/3 rpm
R
L
GND
—
+

MOTOR : MMI-6S2RWA0

ADJUSTMENT PROCEDURES

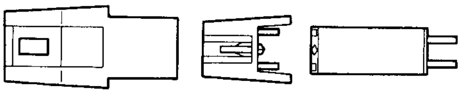
Speed adjustment

1. 45 rpm ..... adjust SVR (in the PCB Assy : P23)←45/33 SW : 45
2. 33 1/3 rpm . adjust SVR in the MOTOR through the hole(a) aboube Fig.

Replacement of cartridge

1. Use the + driver.
2. Remove lead wires connected to terminal strip with soldering iron. (R+), (R-), (L+), (L-)

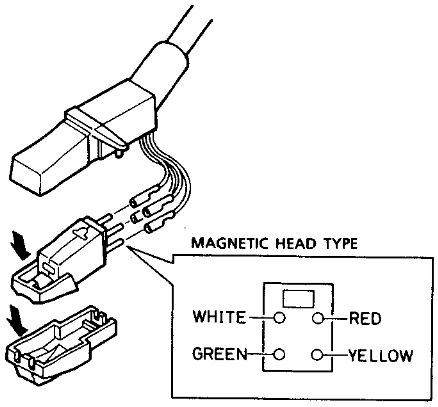
MAGNETIC TYPE



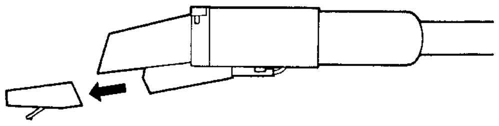
Replacement of stylus

The diamond stylus of the Turntable can normally play for about 300 to 500 hours. However, when sound becomes noisy, check the stylus for wear. If worn out, replace it. Pull the stylus out from the cartridge. Be careful not to touch the stylus tip when replacing the stylus. Hold Headshell by Finger, And Pull Out The Old Stylus.

MAGNETIC TYPE

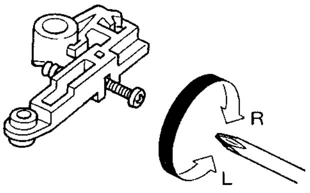

MAGNETIC HEAD TYPE
WHITE
RED
GREEN
YELLOW

MAGNETIC TYPE



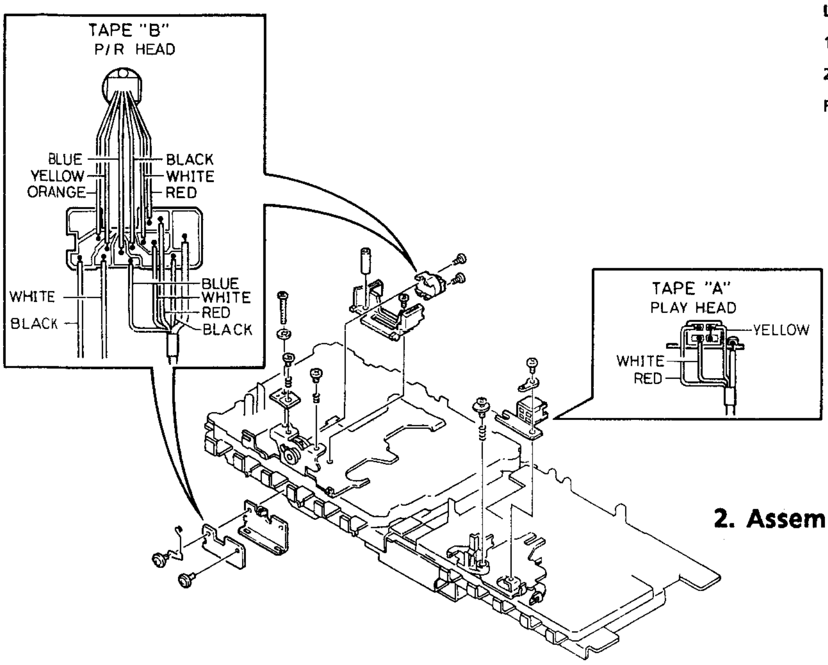
Return adjustment

1. To retard the timing of return, turn the fine adjustment screw clockwise.
2. To advance the timing, turn the fine adjustment screw counter-clockwise.



DISASSEMBLY (TAPE MECHANISM)

1. Replacement of Head


TAPE "B"
P/R HEAD
BLUE
YELLOW
ORANGE
BLACK
WHITE
RED
WHITE
BLACK
BLUE
WHITE
RED
BLACK
TAPE "A"
PLAY HEAD
YELLOW
WHITE
RED

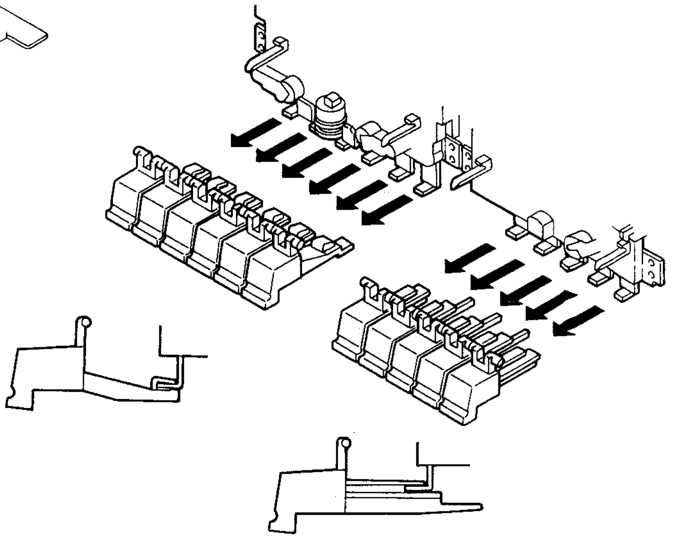
LEAD CONNECTION METHOD OF ROTARY HEAD

1.The root (Bonding parts) of leads from head fix the rubber adhesiver.

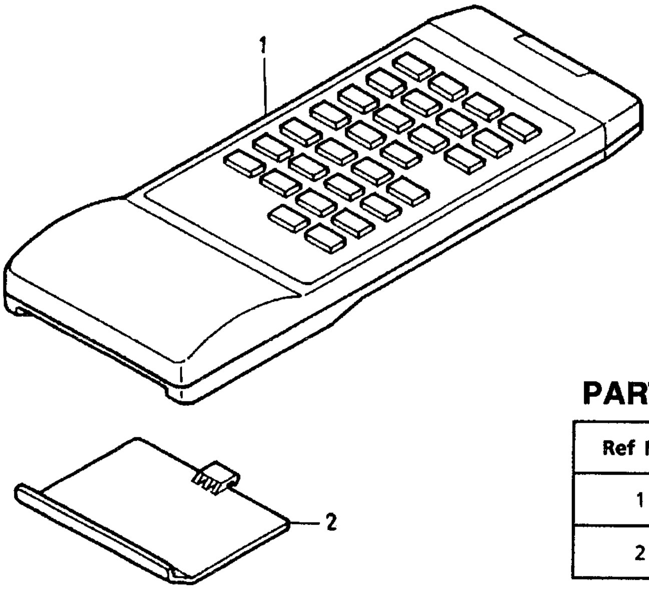
2.Twit (Turn) the fixed Leads.

Reason : Cut for rotation

2. Assemble of mechanism button



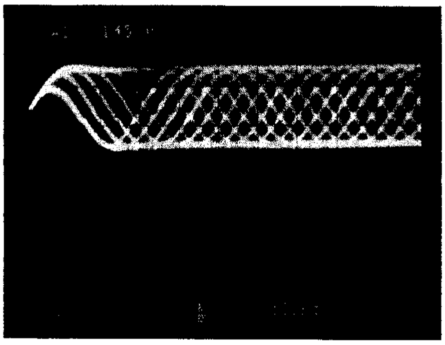
REMOTE CONTROLLER (RB-X802)

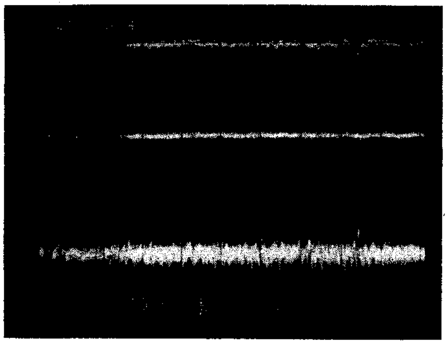


PARTS LIST

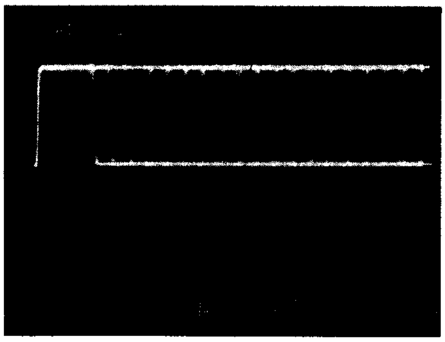
Ref No.	Part No.	Description
1	614 233 0333	ASSY, REMOCON
2	614 233 0340	LID, BATTERY

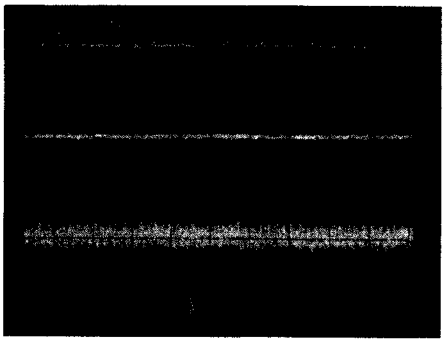
WAVE FORM OF TEST POINT


① TP 1
RF SIGNAL

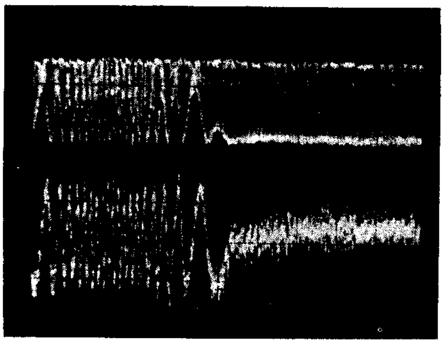

③ TP 1
RF SIGNAL

TP 2
FOCUS ERROR
SIGNAL

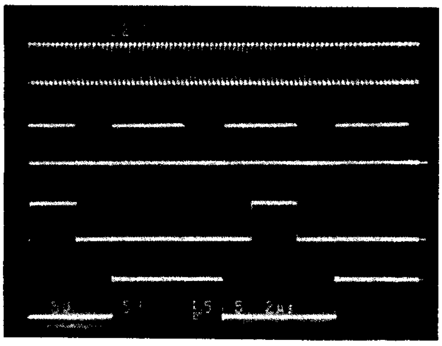

② IC1401-6
EFM SIGNAL


④ TP 1
RF SIGNAL

TP 3
TRACKING
ERROR SIGNAL


SEARCH TIME
⑤ TP 1
RF SIGNAL

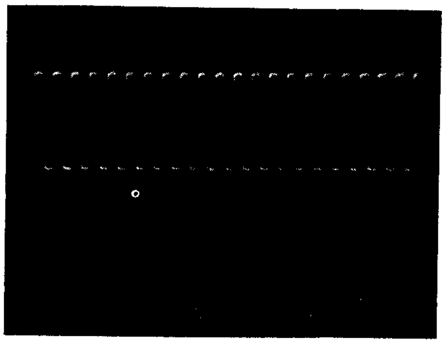
TP 3
TRACKING
ERROR SIGNAL


⑦ IC501 PIN 9
BLCK

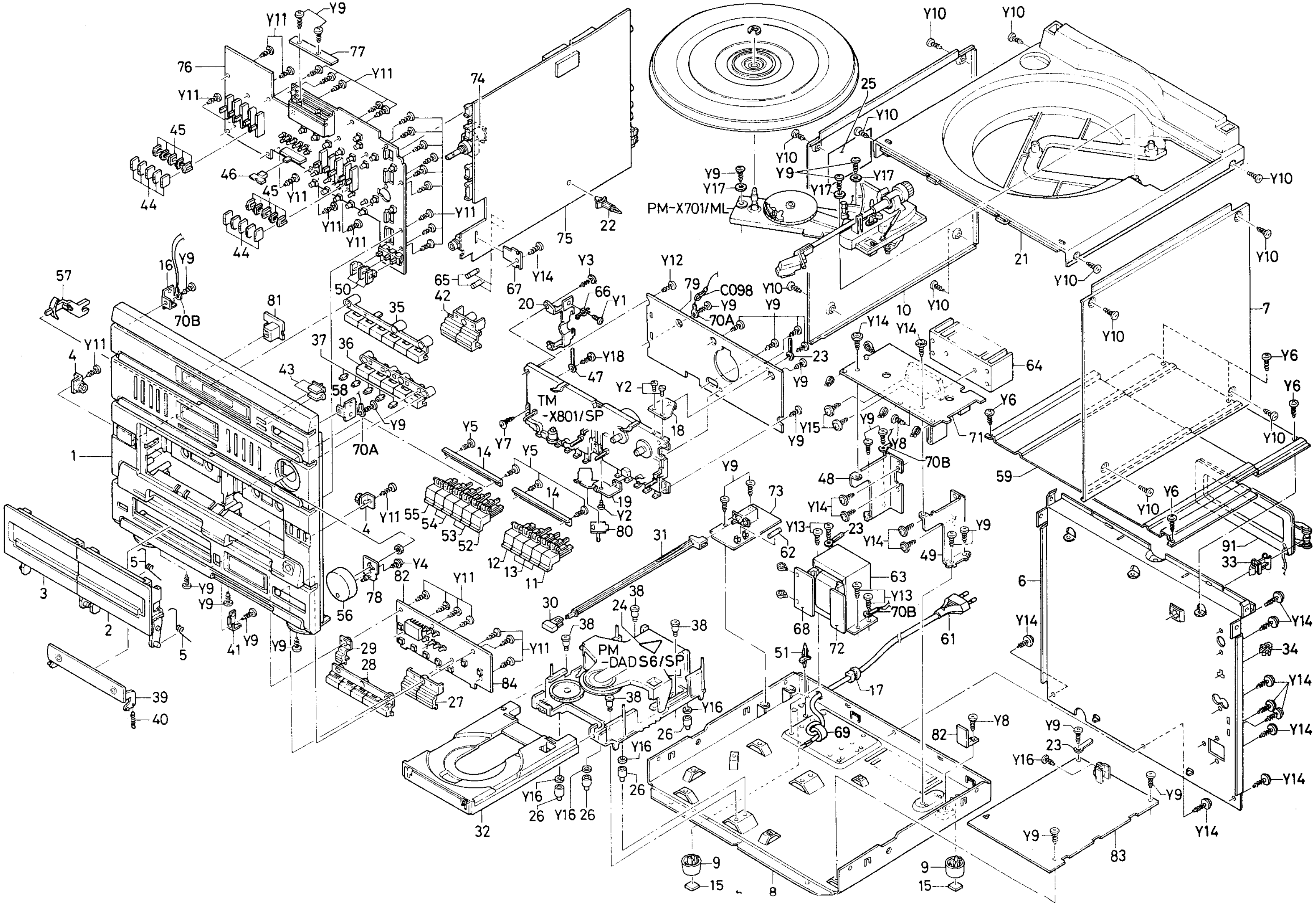
PIN 8
DATA

PIN 7
WCLK 1

PIN 6
LRCK


⑥ TP12
PLCK

EXPLODED VIEW (CABINET & CHASSIS)


Y9
Y11
77
76
Y11
Y11
45
46
45
Y11
44
44
Y11
Y11
Y11
74
75
22
PM-X701/ML
Y9
Y17
Y10
Y9
Y17
Y17
Y10
25
Y10
Y10
Y10
Y10
21
Y10
Y10
16
Y9
57
70B
81
50
35
65
42
67
Y14
Y3
20
66
Y1
Y12
79
C098
Y9
70A
Y9
Y10
Y10
10
Y14
Y14
64
Y10
7
Y6
Y6
Y6
Y11
4
43
37
36
58
70A
Y9
Y18
47
TM
-X801/SP
Y2
18
23
Y9
Y9
Y15
Y9
Y8
71
70B
Y10
59
1
Y5
Y7
14
Y5
14
19
Y2
80
48
Y14
Y14
Y9
49
Y10
Y6
91
33
Y11
4
55
54
53
52
12
13
11
Y9
73
62
Y13
23
63
Y13
70B
6
3
2
5
5
Y9
Y9
41
Y9
Y9
Y4
78
56
82
Y11
Y11
84
31
30
38
24
38
38
PM
-DADS6/SP
38
Y16
26
68
72
51
61
17
Y14
Y14
34
Y14
Y14
Y14
29
28
27
39
40
32
Y16
26
Y16
26
Y16
26
69
82
Y8
Y9
23
Y16
Y9
Y9
83
Y14
9
15
8
9
15

PARTS LIST

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.

Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.

PACKING & ACCESSORIES

Ref. No.	Part No.	Description
	614 231 7631	INNER CARTON
	614 207 8181	PAD, TOP
	614 221 0659	PAD, BOTTOM
	614 231 6672	POLY COVER, SET
	614 176 2685	INNER POLYE COVER, INST MANUAL
	614 176 3712	INNER POLYE COVER, TURN TABLE SHEET
	614 180 4644	PROTECTOR SHEET, SET
	614 231 7686	INSTRUCTION MANUAL
	614 231 6832	LABEL, SAFETY, LASER CLASS
	614 224 3497	LABEL, NEEDLE
	614 219 8223	ASSY, COVER, DUST
	614 106 8749	VINYL SASH, ARM REST
	614 231 5699	TAPE, CARTRIDGE COVER
	614 112 3479	HINGE, L
	614 112 3486	HINGE, R
	614 234 1056	ASSY SHEET, TURNTABLE
	or 614 234 3692	ASSY SHEET, TURNTABLE
	149 519 01	IR REMOTE CONTROLLER RB-X802/SS
	614 023 7344	ANT, FM

CABINET & CHASSIS

Ref. No.	Part No.	Description
1	614 230 6413	ASSY, PANEL, FRONT
2	614 221 6606	ASSY, LID, CASSETTE, TAPE A
3	614 230 6406	ASSY, LID, CASSETTE, TAPE B
4	614 069 0385	GEAR ASSY, DUMPER
5	614 218 0051	SPRING, WIRE, CASSETTE LID
6	614 231 9260	PANEL, REAR
7	614 230 5102	PANEL, SIDE, R
8	614 224 4166	CABINET, BOTTOM
9	614 207 2387	FOOT, REAR
10	614 230 5119	PANEL, SIDE, L
11	614 230 5126	KNOB, LEVER, TAPE A, PAUSE
12	614 230 5133	KNOB, LEVER, TAPE A, REW•F.FWD•STOP/EJECT
13	614 230 5140	KNOB, LEVER, TAPE A, PLAY
14	614 194 9239	BRACKET, MECHANISM BUTTON
15	614 106 4215	STAND, REAR
16	614 221 1373	BRACKET-M, FRONT(L)
17	614 129 1901	FIXER, AC CORD
18	614 216 9247	BRACKET-E, MECHA PCB
19	614 220 6935	BRACKET-M, MECHA PCB (SW)
20	614 220 6942	BRACKET-M, MECHA SW
21	614 229 2372	PANEL, TOP
22	614 129 5534	FIXER, TUNER PCB
23	614 130 0382	LUG, CD PCB
24	614 224 3695	LABEL, SAFETY, LASER BEAM
25	614 191 3698	CAUTION LABEL, LASER BEAM
26	614 195 6978	RUBBER CUSHION, CD FLOATING
27	614 220 6836	BUTTON, CD, PLAY
28	614 230 5157	BUTTON, CD, FUNCTION
29	614 220 6850	BUTTON, CD, EJECT
30	614 220 6874	BUTTON, POWER
31	614 112 7231	JOINT, POWER
32	614 221 1410	TABLE, LOADING, CD TRAY
33	614 108 0307	BRACKET, LOOP ANT
34	614 108 1076	BRACKET, ANT LEAD
35	614 230 5171	BUTTON, TUNER, PRESET
36	614 230 5164	BUTTON, FUNCTION
37	614 221 0222	WINDOW, FUNCTION, LED
38	412 004 5705	SPECIAL SCREW, CD
39	614 230 0671	DOOR, CD
40	614 221 0246	SPRING, TENS, CD DOOR
41	614 220 6928	BRACKET-M, CD DOOR
42	614 220 6829	BUTTON, TUNING (UP/DOWN)
43	614 220 6843	BUTTON, BAND
44	614 220 6737	KNOB, SLIDE, EQ
45	614 220 6690	WINDOW, EQ, LED
46	614 220 6744	KNOB, SLIDE, BALANCE
47	614 129 9136	LUG, MECHANISM
48	614 208 9262	BRACKET-E, HEAT SINK, L
49	614 208 9279	BRACKET-E, HEAT SINK, R
50	614 220 6881	BUTTON, DOLBY•TAPE B SEL• DUB SPEED/BEAT CANCEL
51	614 129 5527	FIXER, BOTTOM
52	614 230 8233	KNOB, LEVER, TAPEB, STOP/EJECT
53	614 230 8257	KNOB, LEVER, TAPEB, F.FWD•PAUSE
54	614 230 8264	KNOB, LEVER, TAPEB, REW•PLAY/DIRECTION
55	614 230 8240	KNOB, LEVER, TAPEB, REC
56	614 224 3442	KNOB, ROTARY, VOLUME
57	614 220 6812	KNOB, LEVER, REVERSE MODE
58	614 221 1816	BRACKET-M, FRONT(R)
59	614 222 1266	SHIELD, TU

FIXING PARTS

Ref. No.	Part No.	Description
Y1	411 020 1302	SCR PAN PCS 1.7X5
Y2	411 021 0304	SCR S-TPG BIN 2X4
Y3	411 021 0809	SCR S-TPG BIN 2X6
Y4	411 021 1202	SCR S-TPG BIN 2X8
Y5	411 021 3107	SCR S-TPG BIN 2.6X8
Y6	411 001 1901	SCR S-TPG BIN 3X6
Y7	411 021 5705	SCR S-TPG BIN 3X6
Y8	411 027 3101	SCR S-TPG BIN 3X8
Y9	411 021 6405	SCR S-TPG BIN 3X8
Y10	411 021 6603	SCR S-TPG BIN 3X8
Y11	411 021 3503	SCR S-TPG BIN 3X10
Y12	411 021 4005	SCR S-TPG BIN 3X12
Y13	411 001 4209	SCR S-TPG BIN 4X8
Y14	411 020 8905	SCR S-TPG BRZ + FG 3X10
Y15	411 020 9506	SCR S-TPG BRZ + FG 3X16
Y16	411 087 8108	WASHER V 3X8X0.5
Y17	411 092 3303	WASHER Z 3X12X1
Y18	411 027 1602	SCR S-TPC BIN 2.6X5

PARTS LIST

ELECTRICAL PARTS

Ref. No.	Part No.	Description
61	⚠ 614 023 3100	POWER CORD, AC
or	⚠ 614 023 3148	POWER CORD, AC
62	⚠ 423 016 9704	FUSE 250V 0.5A, F999
63	⚠ 614 229 8220	POWER TRANS, AC
64	614 221 4909	HEAT SINK
65	⚠ 423 016 7809	FUSE 250V 2A, F701•801
66	614 195 7104	SWITCH, R/P
67	614 232 8385	PCB, HP STOPPER
68	⚠ 614 232 8323	PCB, P.T PRIMARY
	614 223 8066	ASSY, CONNECTOR-S, 3P, AUTO TAPE SELECTOR SW (MECHA.)
69	614 129 9037	CORE
or	614 210 1308	CORE
70A	614 051 9785	LUG, FRONT PCB
70B	614 051 9808	LUG, CD GND
91	614 214 5180	LOOP ANT ASSY
C098	403 001 1906	CERAMIC 0.01U M 16V

MAIN AMPLIFIER P.C.BOARD ASSY

Ref. No.	Part No.	Description
71	614 232 8064	ASSY, PCB, MAIN AMP
	614 203 7362	HEAT SINK, FOR IC903
	614 224 3527	ASSY, CONNECTOR-S, 3P, SP OUT (CN913)
CN911	614 223 9216	SOCKET, 3P, IC REG
or	614 020 6555	SOCKET, 3P, IC REG
CN912	614 216 5249	SOCKET, 10P (B TO B), TUN & PRE
CN913	614 020 1222	SOCKET, 3P, SP OUT
CN914	614 020 1246	SOCKET, 5P, P.T SEC.
IC710	⚠ 409 047 0200	IC STK4132MK2
IC903	⚠ 409 078 2402	IC L7812ML
or	⚠ 409 122 6202	IC NJM7812FA
or	⚠ 409 168 2107	IC UPC7812HF
or	⚠ 409 001 7603	IC AN7812F
Q901	405 015 1606	TR 2SC2655-Y
Q902	405 001 9302	TR 2SA1020-Y
Q903	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
D901	⚠ 407 077 7800	DIODE RBV-402LF-A
D905	⚠ 407 004 9105	DIODE DSF10C
D906	⚠ 407 004 9105	DIODE DSF10C
D907	⚠ 407 004 9105	DIODE DSF10C
D908	⚠ 407 004 9105	DIODE DSF10C
D909	407 053 3208	ZENER DIODE MTZ12B
D910	407 053 3208	ZENER DIODE MTZ12B
D911	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D912	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D948	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
C901	403 057 3800	POLYESTER 0.1U M 50V
C902	403 057 3800	POLYESTER 0.1U M 50V
C903	403 057 3800	POLYESTER 0.1U M 50V
C904	403 053 4405	ELECT 2200U M 35V
C905	403 053 4405	ELECT 2200U M 35V
C906	403 053 4405	ELECT 2200U M 35V
R757	⚠ 401 008 7204	CARBON 2.2K JB 1/2W, FLAME PROOF
R857	⚠ 401 008 7204	CARBON 2.2K JB 1/2W, FLAME PROOF
R901	⚠ 402 044 6701	RESISTOR 0.47 J- 1/2W
R902	⚠ 402 004 4303	FUSIBLE RES 10 J- 1/4W
R903	⚠ 402 004 4303	FUSIBLE RES 10 J- 1/4W
R914	⚠ 402 023 1703	FUSIBLE RES 100 J- 1/4W
R915	⚠ 402 023 1703	FUSIBLE RES 100 J- 1/4W

P.T SECONDARY P.C.BOARD ASSY

Ref. No.	Part No.	Description
72	614 232 8088	ASSY, PCB, P.T SEC
	614 051 9785	LUG, EARTH OF C950
	614 231 0205	SOCKET, 3P W/WIRE, CD (CN916)
CN915	614 020 1246	SOCKET, 5P, MAIN AMP
CN916	614 223 9216	SOCKET, 3P, CD
CN916	614 020 6555	SOCKET, 3P, CD
IC901	⚠ 614 205 2914	IC PROTECTOR ICP-N25
IC902	⚠ 614 205 2914	IC PROTECTOR ICP-N25

POWER SWITCH P.C.BOARD ASSY

Ref. No.	Part No.	Description
73	614 232 8101	ASSY, PCB, POWER SW
	⚠ 614 017 8203	TERMINAL BOARD, AC-IN
	⚠ 614 208 4540	FUSE HOLDER, FOR F999
	⚠ 614 086 2164	COVER, FOR C999
S901	⚠ 614 018 8967	SWITCH, POWER
C999	⚠ 404 000 1607	CERAMIC 0.01U F 400V
or	⚠ 404 033 3401	CERAMIC 0.01U Z -

VR MOTOR P.C.BOARD ASSY

Ref. No.	Part No.	Description
74	614 232 8118	ASSY, PCB, VR MOTOR
L961	614 027 9214	CHOKE COIL
CN709	614 223 9223	SOCKET, 4P, TUN & PRE
or	614 020 6562	SOCKET, 4P, TUN & PRE
CN710	614 017 3819	PLUG, 2P, VR LED
IC961	409 114 4803	IC LB1641
D961	407 053 5806	ZENER DIODE MTZ4.7B
R966	⚠ 402 004 4303	FUSIBLE RES 10 J- 1/4W

TUNER & PRE-AMPLIFIER P.C.BOARD ASSY

Ref. No.	Part No.	Description
75	614 232 8132	ASSY, PCB, TUN & PRE-AMP
	614 208 4540	FUSE HOLDER, FOR F701•801
	614 116 5349	SHIELD PLATE, PART SIDE, FM-RF
	614 117 1029	SHIELD PLATE, SOLDER SIDE, FM-RF
	614 210 4675	FILTER, 459KHZ, (X204•205 PAIR)
	614 218 2840	TERMINAL, FM ANT (JK1)
	614 224 9864	SOCKET, VIDEO (CN706)
	614 218 0068	TERMINAL, 4P, SPEAKER
	614 035 1712	SOCKET, HEADPHONS (CN714)
	614 223 0756	ASSY, CONNECTOR-S, 5P, PHONO (CN704)
	614 226 4089	SHIELD, FTZ
CT101	614 007 3683	TRIMMER, 8PF (BK)
CT151	614 007 6356	TRIMMER, 11PF (WH)
CT152	614 007 6356	TRIMMER, 11PF (WH)
CT153	614 007 6332	TRIMMER, 30PF (GR)
CT154	614 007 6332	TRIMMER, 30PF (GR)
T101	614 028 6922	FILTER
T201	614 030 3476	I.F.T, 10.7MHZ, FM
T202	614 030 4114	I.F.T, 10.7MHZ, FM
T204	614 029 3906	MX COIL
T301	614 027 7845	CHOCK
T302	614 027 7845	CHOCK
L101	614 034 9870	VHF COIL, FM
L102	614 034 9887	VHF COIL, FM
L103	614 028 4058	FILTER, FM
L104	614 035 0036	VHF COIL, FM
L105	614 034 8286	VHF COIL
L151	614 033 8904	O.S.C COIL, MW
L152	614 197 4002	ANT COIL, MW
L153	614 034 1003	O.S.C COIL, LW
L154	614 197 3975	ANT COIL, LW
L155	614 028 4379	FILTER, 1MH, AM
X201	614 030 5128	I.F FILTER, FM
X202	614 030 5128	I.F FILTER, FM

PARTS LIST

Ref. No.	Part No.	Description
X203	614 030 5128	I. F FILTER, FM
X204	614 030 7443	I.F FILTER, 459KHZ, AM
X205	614 211 2939	FILTER, 459KHZ, AM
B101	614 028 7936	FILTER, LEAD FERIGHT BEEZE
B102	614 028 7936	FILTER, LEAD FERIGHT BEEZE
VR707	614 221 7443	VR, ROTARY
SVR201	614 003 3267	SEMI-FIXED VR, 20K OHM (B)
or	614 006 9693	SEMI-FIXED VR, 20K OHM (B)
SVR202	614 003 3250	SEMI-FIXED VR, 10K OHM (B)
or	614 006 9686	SEMI-FIXED VR, 10K OHM (B)
SVR302	614 003 3250	SEMI-FIXED VR, 10K OHM (B)
or	614 006 9686	SEMI-FIXED VR, 10K OHM (B)
CN701	614 035 4942	SOCKET, 5P, CD
CN702	614 017 2102	PLUG, 3P, CD
CN703	614 223 9285	SOCKET, 10P, DECK
or	614 020 6623	SOCKET, 10P, DECK
CN704	614 020 1246	SOCKET, 5P, PHONO
CN707	614 216 5157	PLUG, 10P, MAIN AMP
CN708	614 223 9223	SOCKET, 4P, VR
or	614 020 6562	SOCKET, 4P, VR
CN712	614 020 1222	SOCKET, 3P, INNER CONNECT
CN713	614 020 1222	SOCKET, 3P, INNER CONNECT
CN716	614 017 1440	PLUG, 3P, MAIN AMP
CN717	614 208 2348	SOCKET, 7P (B TO B), FRONT
CN718	614 208 2379	SOCKET, 10P (B TO B), FRONT
CN719	614 208 2331	SOCKET, 6P (B TO B), FRONT
CN720	614 208 2355	SOCKET, 8P (B TO B), FRONT
IC201	409 016 2204	IC LA1265S
IC301	409 016 9500	IC LA3361
IC402	409 154 0209	IC TC9172AP
IC701	409 018 4909	IC LA6458S
IC702	409 022 3608	IC LC7818
IC703	409 053 1703	IC TC9174P
IC711	409 018 4909	IC LA6458S
Q101	405 092 5702	TR 2SK606-Q
Q102	405 012 5904	TR 2SC1923-Y
Q103	405 012 5904	TR 2SC1923-Y
Q104	405 012 5904	TR 2SC1923-Y
Q105	405 092 5702	TR 2SK606-Q
or	405 092 7606	TR 2SK606-R
Q151	405 016 2206	TR 2SC2878-A
or	405 016 2305	TR 2SC2878-B
Q152	405 016 2206	TR 2SC2878-A
or	405 016 2305	TR 2SC2878-B
Q153	405 016 2206	TR 2SC2878-A
or	405 016 2305	TR 2SC2878-B
Q154	405 016 2206	TR 2SC2878-A
or	405 016 2305	TR 2SC2878-B
Q155	405 016 2206	TR 2SC2878-A
or	405 016 2305	TR 2SC2878-B
Q157	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q158	405 078 5405	TR 2SK301-R
Q201	405 018 7902	TR 2SC380TM-O
Q202	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q301	405 012 2002	TR 2SC1815-GR
Q302	405 012 2002	TR 2SC1815-GR
Q303	405 016 2206	TR 2SC2878-A
or	405 016 2305	TR 2SC2878-B
Q304	405 016 2206	TR 2SC2878-A
or	405 016 2305	TR 2SC2878-B
Q351	405 001 7001	TR 2SA1015-GR
Q352	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q354	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q355	405 001 7001	TR 2SA1015-GR
Q357	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q358	405 001 7001	TR 2SA1015-GR
Q361	405 001 7001	TR 2SA1015-GR
Q370	405 001 7001	TR 2SA1015-GR
Q371	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q372	405 001 7001	TR 2SA1015-GR
Q402	405 078 4903	TR 2SC2634-R
Q403	405 078 4903	TR 2SC2634-R
Q771	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q871	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q904	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q905	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q906	405 001 7001	TR 2SA1015-GR
or	405 005 2002	TR 2SA733-P
D101	407 105 0100	VARACTOR DI SVC211-B-AL
D102	407 105 0100	VARACTOR DI SVC211-B-AL
D103	407 105 0100	VARACTOR DI SVC211-B-AL
D104	407 012 5809	DIODE 1SS176
or	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D151	407 091 5004	VARACTOR DI SVC321SPA-C-2
D152	407 091 5004	VARACTOR DI SVC321SPA-C-2
D201	407 012 5809	DIODE 1SS176
or	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D301	407 012 5809	DIODE 1SS176
or	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D302	407 005 4505	DIODE DS442X
or	407 013 1701	DIODE 1S1588
or	407 013 7109	DIODE 1S2473
D351	407 012 5809	DIODE 1SS176
or	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D352	407 053 8807	ZENER DIODE MTZ9.1B
D401	407 012 5809	DIODE 1SS176
or	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D430	407 053 6704	ZENER DIODE MTZ5.6B
D913	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D914	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D915	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D916	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D917	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D918	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D919	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D920	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D921	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D922	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D923	407 053 7107	ZENER DIODE MTZ6.2B
D924	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D950	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
C051	403 062 5103	POLYESTER 5600PK 50V
C052	403 062 5103	POLYESTER 5600PK 50V
C053	403 062 5103	POLYESTER 5600PK 50V
C054	403 062 5103	POLYESTER 5600PK 50V
C154	403 082 2205	POLYPRO 560P J 100V
C155	403 082 2007	POLYPRO 510P J 100V
C157	403 033 3206	CERAMIC 82P J 50V
C306	403 080 5000	POLYPRO 1000P J 100V
C407	403 106 1603	NP-ELECT 1U Q 50V
C734	403 057 3800	POLYESTER 0.1U N 50V

PARTS LIST

Ref. No.	Part No.	Description
C735	403 057 3800	POLYESTER 0.1U M 50V
C834	403 057 3800	POLYESTER 0.1U M 50V
C835	403 057 3800	POLYESTER 0.1U M 50V
R380	⚠ 401 018 1209	CARBON 33 JB 1/4W, FLAME PROOF
R743	⚠ 401 010 5601	CARBON 5.6 JB 1/2W, FLAME PROOF
R744	⚠ 401 009 5506	CARBON 330 JB 1/2W, FLAME PROOF
R843	⚠ 401 010 5601	CARBON 5.6 JB 1/2W, FLAME PROOF
R844	⚠ 401 009 5506	CARBON 330 JB 1/2W, FLAME PROOF

FRONT P.C.BOARD ASSY

Ref. No.	Part No.	Description
76	614 232 8156	ASSY, PCB, FRONT
	614 216 9285	MOUNT-E, LCD
	614 220 3651	SHEET, LCD
	614 112 2328	DOUBLE FACE, 3X60MM, LCD
	614 107 0971	TAPE, 9X100MM, LCD
A401	614 217 2612	LCD (LIQUID CRYSTAL DISPLAY)
X401	614 008 0063	CRYSTAL, 7.2MHZ (TUNER)
or	614 204 0317	CRYSTAL, 7.2MHZ (TUNER)
S401	614 220 5655	SWITCH, TACT, UP (TUNING +)
S402	614 220 5655	SWITCH, TACT, DOWN (TUNING-)
S403	614 220 5655	SWITCH, TACT, BAND
S404	614 220 5655	SWITCH, TACT, TUNING/FM MODE
S405	614 220 5655	SWITCH, TACT, PRESET (P1)
S406	614 220 5655	SWITCH, TACT, PRESET (P2)
S407	614 220 5655	SWITCH, TACT, PRESET (P3)
S408	614 220 5655	SWITCH, TACT, PRESET (P4)
S409	614 220 5655	SWITCH, TACT, PRESET (P5)
S410	614 220 5655	SWITCH, TACT, PRESET (P6)
S902	614 220 5655	SWITCH, TACT, PHONO
S903	614 220 5655	SWITCH, TACT, VIDEO
S904	614 220 5655	SWITCH, TACT, TUNER
S905	614 220 5655	SWITCH, TACT, TAPE
S906	614 220 5655	SWITCH, TACT, CD
S914	614 221 2448	SWITCH, PUSH, DOLBY
VR701	614 221 4756	VR, SLIDE, G.EQ, LEFT (100HZ)
VR702	614 221 4756	VR, SLIDE, G.EQ, LEFT (300HZ)
VR703	614 221 4756	VR, SLIDE, G.EQ, LEFT (1KHZ)
VR704	614 221 4756	VR, SLIDE, G.EQ, LEFT (3KHZ)
VR705	614 221 4756	VR, SLIDE, G.EQ, LEFT (12KHZ)
VR706	614 003 5766	V.R, BALANCE (VR706•806)
VR801	614 221 4756	VR, SLIDE, G.EQ, RIGHT (100HZ)
VR802	614 221 4756	VR, SLIDE, G.EQ, RIGHT (300HZ)
VR803	614 221 4756	VR, SLIDE, G.EQ, RIGHT (1KHZ)
VR804	614 221 4756	VR, SLIDE, G.EQ, RIGHT (3KHZ)
VR805	614 221 4756	VR, SLIDE, G.EQ, RIGHT (12KHZ)
CN401	614 035 4911	SOCKET, 2P, LCD LAMP (CN907)
CN901	614 208 2249	PLUG, 6P (B TO B), TUN & PRE
CN902	614 208 2263	PLUG, 8P (B TO B), TUN & PRE
CN903	614 208 2256	PLUG, 7P (B TO B), TUN & PRE
CN904	614 208 2287	PLUG, 10P (B TO B), TUN & PRE
CN905	614 035 4928	SOCKET, 3P, IR
CN909	614 223 9247	SOCKET, 6P, DECK
or	614 020 6586	SOCKET, 6P, DECK
IC401	410 064 8407	IC TC9306F-045 BS (TUNER)
IC721	409 018 4909	IC LA6458S
IC761	409 003 0305	IC BA6137
IC861	409 003 0305	IC BA6137
Q404	405 012 2002	TR 2SC1815-GR (TUNER)
or	405 020 7204	TR 2SC945A-K (TUNER)
D402	407 012 5809	DIODE 1SS176
or	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D403	407 012 5809	DIODE 1SS176
or	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D404	407 012 5809	DIODE 1SS176
D404	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D405	407 012 5809	DIODE 1SS176
or	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D406	407 012 5809	DIODE 1SS176
or	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D407	407 012 5809	DIODE 1SS176
or	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D408	407 005 4505	DIODE DS442X
or	407 013 1701	DIODE 1S1588
or	407 013 7109	DIODE 1S2473
D409	407 005 4505	DIODE DS442X
or	407 013 1701	DIODE 1S1588
or	407 013 7109	DIODE 1S2473
D410	407 005 4505	DIODE DS442X
or	407 013 1701	DIODE 1S1588
or	407 013 7109	DIODE 1S2473
D411	407 005 4505	DIODE DS442X
or	407 013 1701	DIODE 1S1588
or	407 013 7109	DIODE 1S2473
D431	407 012 5809	DIODE 1SS176
or	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D761	408 008 9108	LED SLR-56VC70F130-N
D762	408 008 9108	LED SLR-56VC70F130-N
D763	408 008 9108	LED SLR-56VC70F130-N
D764	408 008 9108	LED SLR-56VC70F130-N
D765	408 008 9108	LED SLR-56VC70F130-N
D861	408 008 9108	LED SLR-56VC70F130-N
D862	408 008 9108	LED SLR-56VC70F130-N
D863	408 008 9108	LED SLR-56VC70F130-N
D864	408 008 9108	LED SLR-56VC70F130-N
D865	408 008 9108	LED SLR-56VC70F130-N
D933	408 008 9108	LED SLR-56VC70F130-N
D934	408 008 9108	LED SLR-56VC70F130-N
D935	408 008 9108	LED SLR-56VC70F130-N
D936	408 008 9108	LED SLR-56VC70F130-N
D937	408 008 9108	LED SLR-56VC70F130-N
C401	403 019 0403	CERAMIC 24P J 50V
C402	403 019 0403	CERAMIC 24P J 50V
C410	403 196 9602	DL-ELECT 0.047F Z 5.5V

LCD LAMP (LED) P.C.BOARD ASSY

Ref. No.	Part No.	Description
77	614 232 8170	ASSY, PCB, LAMP
CN402	614 035 4911	SOCKET, 2P, FRONT (CN908)
D441	407 129 1107	LED SLP-880A-51
D442	407 129 1107	LED SLP-880A-51
D443	407 129 1107	LED SLP-880A-51

VR LED P.C.BOARD ASSY

Ref. No.	Part No.	Description
78	614 232 8187	ASSY, PCB, VR LED
CN711	614 225 0129	ASSY, CONNECTOR-S, 2P, VR MOTOR
D962	407 141 2502	LED SLC-22VR5F-J

DECK P.C.BOARD ASSY

Ref. No.	Part No.	Description
79	614 221 4947	ASSY, PCB, DECK AMP
L501	614 029 3807	MX COIL, 85KHZ
L502	614 027 8545	CHOKE COIL, 3.3MH

PARTS LIST

Ref. No.	Part No.	Description
L502	614 210 3685	INDUCTOR, FERITE, 3.3MH
L511	614 202 8865	FILTER, 6.8MH
L512	614 029 3142	MX COIL, 85KHZ
L601	614 029 3807	MX COIL, 85KHZ
L602	614 027 8545	CHOKE COIL, 3.3MH
or	614 210 3685	INDUCTOR, FERITE, 3.3MH
L611	614 202 8865	FILTER, 6.8MH
L612	614 029 3142	MX COIL, 85KHZ
L981	614 224 3367	TRANS, OSC, 85KHZ
SVR1	614 003 3090	SEMI-FIXED VR, 20K OHM (B)
SVR501	614 003 6183	SEMI-FIXED VR, 10K OHM (B)
SVR502	614 003 6183	SEMI-FIXED VR, 10K OHM (B)
SVR503	614 003 6183	SEMI-FIXED VR, 10K OHM (B)
SVR504	614 003 6220	SEMI-FIXED VR, 100K OHM (B)
SVR601	614 003 6183	SEMI-FIXED VR, 10K OHM (B)
SVR602	614 003 6183	SEMI-FIXED VR, 10K OHM (B)
SVR603	614 003 6183	SEMI-FIXED VR, 10K OHM (B)
SVR604	614 003 6220	SEMI-FIXED VR, 100K OHM (B)
CN1	614 017 2102	PLUG, 3P, AUTO TAPE SELECTOR SW (MECHA.)
CN2	614 017 2133	PLUG, 6P, MECHANISM SW
CN5	614 016 4084	PLUG, 2P, HIGH SPEED (TEST PIN)
CN6	614 020 8849	SOCKET, 3P, TAPE OUT (TEST PIN)
CN7	614 223 9223	SOCKET, 4P, MOTOR
CN8	614 223 9209	SOCKET, 2P, STOP SW
CN9	614 227 3623	ASSY, CONNECTOR-S, 4P, TAPE A HEAD
CN10	614 224 2650	ASSY, CONNECTOR-S, 7P, TAPE B HEAD
CN717	614 020 8870	SOCKET, 6P, TUN & PRE
CN718	614 020 8917	SOCKET, 10P, TUN & PRE
IC1	409 020 9107	IC LC4069UB
or	409 051 3907	IC TC4069UBP
or	409 059 3206	IC UPD4069UBC
IC501	409 121 8702	IC LA3246
IC502	409 145 8405	IC UPC1330HA
IC521	409 016 8701	IC LA3220
IC551	409 119 9803	IC CXA1101P
Q1	405 001 7001	TR 2SA1015-GR
or	405 005 2002	TR 2SA733-P
Q2	405 001 7001	TR 2SA1015-GR
or	405 005 2002	TR 2SA733-P
Q3	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q4	405 001 7001	TR 2SA1015-GR
or	405 005 2002	TR 2SA733-P
Q5	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q6	405 012 7403	TR 2SC2001-K
or	405 013 1301	TR 2SC2120-Y
Q8	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q9	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q10	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q501	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q502	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q504	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q505	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q506	405 011 8609	TR 2SC1740S-S
Q506	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q507	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q508	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q509	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q510	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q601	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
Q601	405 020 7204	TR 2SC945A-K
Q602	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q604	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q605	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q606	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q607	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q608	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q609	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q981	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q982	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q983	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q984	405 011 8609	TR 2SC1740S-S
or	405 012 2002	TR 2SC1815-GR
or	405 020 7204	TR 2SC945A-K
Q985	405 011 1907	TR 2SC1627-Y
D1	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D2	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D3	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D4	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D5	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D6	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D7	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D8	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D9	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D10	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D11	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D12	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D13	407 007 9904	DIODE GMA01

PARTS LIST

Ref. No.	Part No.	Description
D13	407 012 4406	DIODE 1SS133
D14	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D15	407 005 4505	DIODE DS442X
or	407 013 7109	DIODE 1S2473
D16	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D17	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D18	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D19	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D99	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D501	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D502	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D601	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D602	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
C985	403 080 9602	POLYPRO 0.015U J 100V
R981	⚠ 402 004 4303	FUSIBLE RES 10 J- 1/4W

STOP SWITCH P.C.BOARD ASSY

Ref. No.	Part No.	Description
80	614 221 4954	ASSY, PCB, STOP
	614 203 7911	SWITCH, STOP
CN58	614 223 9209	SOCKET, 2P, DECK

IR REMOCON RECIEVER P.C.BOARD ASSY

Ref. No.	Part No.	Description
81	614 232 8194	ASSY, PCB, IR
S411	614 217 8935	SWITCH OPTO CONNECTOR (S909)
CN906	614 035 4928	SOCKET, 3P, FRONT

MOTOR IC REGULATOR P.C.BOARD ASSY

Ref. No.	Part No.	Description
82	614 232 8217	ASSY, PCB, REG
CN910	614 223 9216	SOCKET, 3P, MAIN
or	614 020 6555	SOCKET, 3P, MAIN
IC904	⚠ 409 078 2402	IC L7812ML
or	⚠ 409 122 6202	IC NJM7812FA
or	⚠ 409 168 2107	IC UPC7812HF
or	⚠ 409 001 7603	IC AN7812F

CD MAIN P.C.BOARD ASSY

Ref. No.	Part No.	Description
83	614 230 8646	ASSY, PCB, CD MAIN
	614 121 5891	HEAT SINK, FOR IC1601
or	614 121 6829	HEAT SINK, FOR IC1601
	614 016 3858	PLUG, 3P, TP12·18·14 (TEST PIN)
	614 016 3865	PLUG, 4P, TP1~4 (TEST PIN)
T1101	614 194 3596	FILTER, RF COIL
T1102	614 194 3619	O.S.C COIL, PLL
L1401	⚠ 614 028 4133	FILTER, 10UH
L1701	⚠ 614 028 4256	FILTER, 100UH
X1301	614 215 5523	RESONATOR, 4.19MHZ
or	614 215 5561	RESONATOR, 4.19MHZ
X1401	614 215 5509	RESONATOR, 8.64MHZ
X1401	614 215 5547	RESONATOR, 8.64MHZ
S0705	614 211 2991	SOCKET, 4P, LINE OUT
SVR1102	614 223 1944	POTENTIOMETER, 100K OHM (B)
SVR1104	614 223 1913	POTENTIOMETER, 20K OHM (B)
CN705	614 020 1222	SOCKET, 4P, LINE OUT
CN710	614 017 2102	PLUG, 3P, TUN & PRE
CN715	614 035 5963	SOCKET, 5P, TUN & PRE
CN1001	614 017 2577	PLUG, 6P, PICK SENCER
CN1002	614 220 2739	PLUG, 6P, PICK ACTUATOR
CN1003	614 017 2553	PLUG, 4P, MOTOR
CN1004	614 017 2546	PLUG, 3P, MECHA SW
CN1007	614 035 5994	SOCKET, 8P, CD SW
CN1008	614 035 6007	SOCKET, 9P, CD SW
IC1101	409 124 6507	IC LA9200NM
IC1201	⚠ 409 018 5500	IC LA6510
IC1202	⚠ 409 018 5500	IC LA6510
IC1301	410 099 9608	IC CXP5046H-225S
IC1401	409 200 0702	IC LC7860KA
IC1402	409 123 7109	IC LC3517BS-15
or	409 209 0307	IC UM6116K-2
IC1501	409 136 7509	IC LC7881-C
IC1601	⚠ 409 189 4203	IC M5278D05
IC1602	⚠ 409 224 2102	IC AN79N05
Q1101	405 080 7107	TR DTA113ZS
Q1201	405 014 5209	TR 2SC2458GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
Q1202	405 014 5209	TR 2SC2458GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
Q1203	405 001 0309	TR RN1203
or	405 000 4407	TR DTC124ES
Q1206	405 033 6805	TR 2SD1468S-S
Q1207	405 014 5209	TR 2SC2458GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
Q1300	405 001 0309	TR RN1203
or	405 000 4407	TR DTC124ES
Q1301	405 014 5209	TR 2SC2458GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
Q1302	405 001 0309	TR RN1203
or	405 000 4407	TR DTC124ES
Q1303	405 014 5209	TR 2SC2458GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
Q1323	405 014 5209	TR 2SC2458GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
Q1324	405 014 5209	TR 2SC2458GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
Q1325	405 002 1305	TR 2SA1048-Y
or	405 006 1806	TR 2SA933S-R
or	405 006 1905	TR 2SA933S-S
Q1326	405 099 1004	TR 2SD592-S
or	405 099 7501	TR 2SD592-R
Q1327	405 099 0908	TR 2SB621-S
or	405 099 7303	TR 2SB621-R
Q1501	405 014 5209	TR 2SC2458GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
Q1502	405 014 5209	TR 2SC2458GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
Q1503	405 014 5209	TR 2SC2458GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
Q1504	405 014 5209	TR 2SC2458GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
Q1505	405 014 5209	TR 2SC2458GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S

PARTS LIST

Ref. No.	Part No.	Description
Q1602	405 001 0309	TR RN1203
or	405 000 4407	TR DTC124ES
D1101	407 105 0100	VARACTOR DI SVC211-B-AL
D1103	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1104	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1105	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1106	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1201	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1202	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1301	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1302	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1314	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1601	⚠ 407 004 9105	DIODE DSF10C
or	⚠ 407 012 3300	DIODE 1SR35-200A
D1602	⚠ 407 004 9105	DIODE DSF10C
or	⚠ 407 012 3300	DIODE 1SR35-200A
D1603	⚠ 407 004 9105	DIODE DSF10C
or	⚠ 407 012 3300	DIODE 1SR35-200A
D1604	⚠ 407 004 9105	DIODE DSF10C
or	⚠ 407 012 3300	DIODE 1SR35-200A
D1609	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1610	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
C1117	403 067 6204	MT-COMPO 0.15U J 50V
C1133	403 080 5000	POLYPRO 1000P J 100V
C1235	403 154 2102	NP-ELECT 1U M 50V
C1507	403 062 5103	POLYESTER 5600P K 50V
C1508	403 062 5103	POLYESTER 5600P K 50V
C1511	403 056 7908	POLYESTER 1000P K 50V
C1512	403 056 7908	POLYESTER 1000P K 50V
C1606	403 043 3104	ELECT 2200U M 16V
C1607	403 043 3104	ELECT 2200U M 16V
R1601	⚠ 402 044 7104	RESISTOR 0.68 J- 1/2W
R1602	⚠ 402 044 7104	RESISTOR 0.68 J- 1/2W

CD SWITCH P.C.BOARD ASSY

Ref. No.	Part No.	Description
84	614 230 8660	ASSY, PCB, CD SW
S1701	614 220 5631	SWITCH, TACT, MEMORY
S1702	614 220 5631	SWITCH, TACT, PLAY/PAUSE
S1703	614 220 5631	SWITCH, TACT, OPEN/CLOSE
S1704	614 220 5631	SWITCH, TACT, REPEAT
S1705	614 220 5631	SWITCH, TACT, BACK
S1706	614 220 5631	SWITCH, TACT, FWD
S1707	614 220 5631	SWITCH, TACT, STOP
S1708	614 220 5631	SWITCH, TACT, EDIT
CN1007	614 035 4973	SOCKET, 8P, CD MAIN
CN1008	614 035 4980	SOCKET, 9P, CD MAIN
Q1701	405 082 4609	TR DTA123YS
Q1702	405 082 4609	TR DTA123YS
Q1703	405 082 4609	TR DTA123YS
D1701	407 081 5106	LED SL-1283-20
D1702	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1703	407 007 9904	DIODE GMA01
or	407 012 4406	DIODE 1SS133
D1704	408 011 8709	LED SLR-56MC70F130-P
or	408 012 1808	LED SLR-56MC70F130-Q
D1705	408 008 9108	LED SLR-56VC70F130-N
or	408 008 9207	LED SLR-56VC70F130-P
D1706	408 008 9108	LED SLR-56VC70F130-N
D1706	408 008 9207	LED SLR-56VC70F130-P
D1707	408 011 8709	LED SLR-56MC70F130-P
or	408 012 1808	LED SLR-56MC70F130-Q
D1708	408 008 9108	LED SLR-56VC70F130-N
or	408 008 9207	LED SLR-56VC70F130-P
D1709	408 008 9108	LED SLR-56VC70F130-N
or	408 008 9207	LED SLR-56VC70F130-P
D1710	408 008 9108	LED SLR-56VC70F130-N
or	408 008 9207	LED SLR-56VC70F130-P

EXPLODED VIEW & PARTS LIST(TURN TABLE MECHANISM)

TURNTABLE MECHANISM (PM-X701/ML)

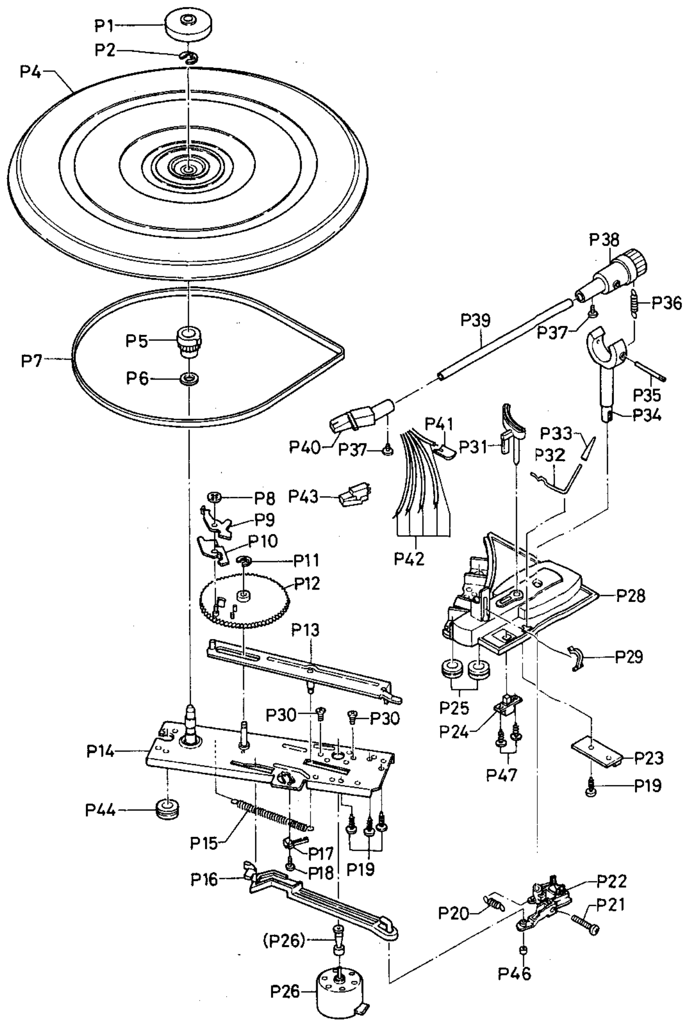
Ref. No.	Part No.	Description
P1	614 120 0118	SPACER, 45 ADAPTOR
P2	411 001 0508	RING E 6
P4	614 225 8866	TURNTABLE
P5	614 225 8835	GEAR, CENTER
P6	412 037 6700	SPECIAL WASHER, TURN TABLE
P7	614 225 8873	BELT, FLAT
P8	412 037 6809	SPECIAL WASHER
P9	614 225 8941	LEVER, TRIP POWL
P10	614 225 8958	LEVER, TRIP CLUTCH
P11	412 029 9702	SPECIAL WASHER
P12	614 225 8842	GEAR
P13	614 225 8248	ASSY, SLIDE
P14	614 225 8217	ASSY, CHASSIS
P15	614 201 8385	SPRING COIL
P16	614 225 8972	LEVER, TRIP LEVER
P17	614 202 0920	SWITCH
P18	411 022 7807	SCR S-TPG PAN 2X6
P19	411 023 4003	SCR S-TPG PAN 3X10
P20	614 225 9085	SPRING, TENS
P21	411 002 7209	SCR PAN 3X16
P22	614 225 8989	LEVER
P24	614 225 9146	SWITCH, SLIDE, 45/33
P25	614 225 8781	CUSHION, RUBBER
P26	614 225 8170	ASSY, MOTOR
P28	614 225 8590	CHASSIS
P29	614 225 8811	CLAMP, ARM ROCK
P30	412 037 1002	SPECIAL SCREW, MOTOR FIX
P31	614 225 8910	LIFTER
P32	614 225 9023	ROD, CUE
P33	614 225 8514	KNOB, CUE
P44	614 225 8774	CUSHION, RUBBER
P45	614 225 9030	ROD
P46	614 225 8804	FIXER
P47	411 022 7807	SCR S-TPG PAN 2X6

PCB ASSY

Ref. No.	Part No.	Description
P23	614 225 8163	ASSY, PCB
	614 006 9655	VR
	614 016 8105	PLUG, 5P

TONE ARM ASSY

Ref. No.	Part No.	Description
	614 225 8224	ASSY, TONE ARM
P34	614 225 8798	HOLDER
P35	614 225 8675	SHAFT, PIVOT PIN
P36	614 225 9078	SPRING, TENS
P37	411 022 9900	SCR S-TPG PAN 2.3X5
P38	614 225 8743	SUPPORT, PIVOT
P39	614 225 9054	PIPE
P40	614 225 8927	HEAD SHELL
P41	614 225 8729	LUG
P42	614 225 8187	ASSY, WIRE
P43	614 213 4740	CARTRIDGE (MG2551)
	614 213 4757	STYLUS (ST-59U)



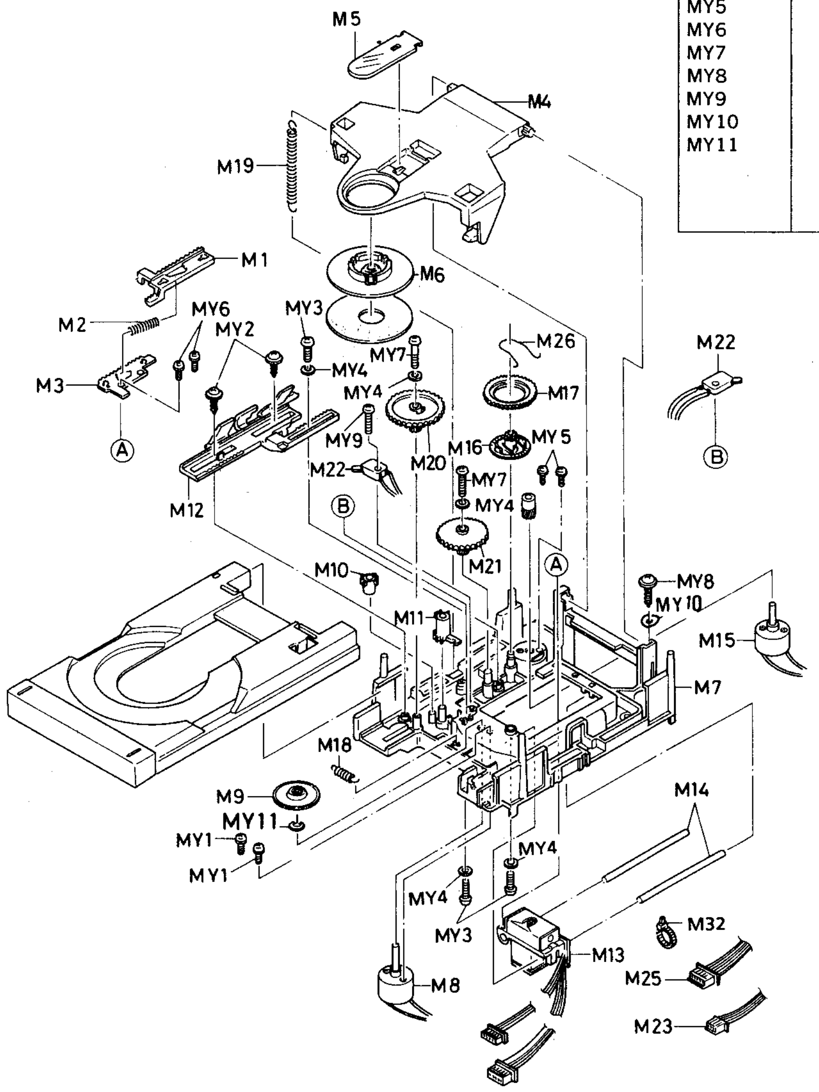
EXPLODED VIEW & PARTS LIST(CD MECHANISM)

MECHANISM (PM-DADS6/SP)

Ref. No.	Part No.	Description
M1	614 216 9766	GEAR, PICK UP RACK UPPER
M2	614 216 9896	SPRING, COMP, RACK BACK
M3	614 216 9759	GEAR, PICK UP RACK LOWER
M4	614 216 9858	LEVER, CHUCK
M5	614 211 6654	SPRING PLATE, CHUCK
M6	614 219 0104	ASSY, PULLEY, CHUCK
M7	614 216 9728	CHASSIS
M8	614 045 2105	COMMUTATE MOTOR, SPINDLE
M9	614 216 9841	TURNTABLE
M10	614 216 9742	GEAR, CHANGE SLIDE
M11	614 216 9810	GEAR, CHANGE RACK
M12	614 216 9865	SLIDE, DRIVING
M13	⚠ 614 218 6855	PICKUP, LASER
M14	614 145 9622	SHAFT, PICK UP GUIDE
M15	614 217 7068	COMMUTATE MOTOR ASSY, SLED
M16	614 216 9797	GEAR, CLUTCH INNER
M17	614 216 9780	GEAR, CLUTCH OUTER
M18	614 216 9889	SPRING, TENS
M19	614 223 2217	SPRING, TENS, CHUCK LEVER BACK
M20	614 216 9773	GEAR, TRAY SLED
M21	614 216 9803	GEAR, PICK UP SLED
M22	614 018 9223	SWITCH, LIMIT OR LOAD OUT
M23	614 224 3138	ASSY, CONNECTOR-S, 3P
M25	614 224 3145	ASSY, CONNECTOR-S, 4P
M26	614 216 9902	SPRING, WIRE, CLUTCH
M32	614 129 4971	FIXER, LEAD

FIXING PARTS (MECHANISM)

Ref. No.	Part No.	Description
MY2	411 020 9902	SCR S-TPG BRZ+FLG 3X8, SLIDE FIX
MY3	411 022 8408	SCR S-TPG PAN 2X8, SHAFT FIX
MY4	411 087 4704	WASHER V 2X6X0.4, SHAFT FIX
MY5	411 044 7205	SCR PAN+SW 2X4, MOTOR FIX
MY6	411 044 7502	SCR PAN+SW 2X5, RACK FIX
MY7	411 119 8908	SCR S-TPG PAN 2X14, GEAR FIX
MY8	411 020 9100	SCR, SPECIAL
MY9	411 104 4205	SCR TPG PAN PCS 1.7X8, SW FIX
MY10	411 092 2900	WASHER Z 3X10X1, LEVER FIX
MY11	412 032 0208	SPECIAL WASHER



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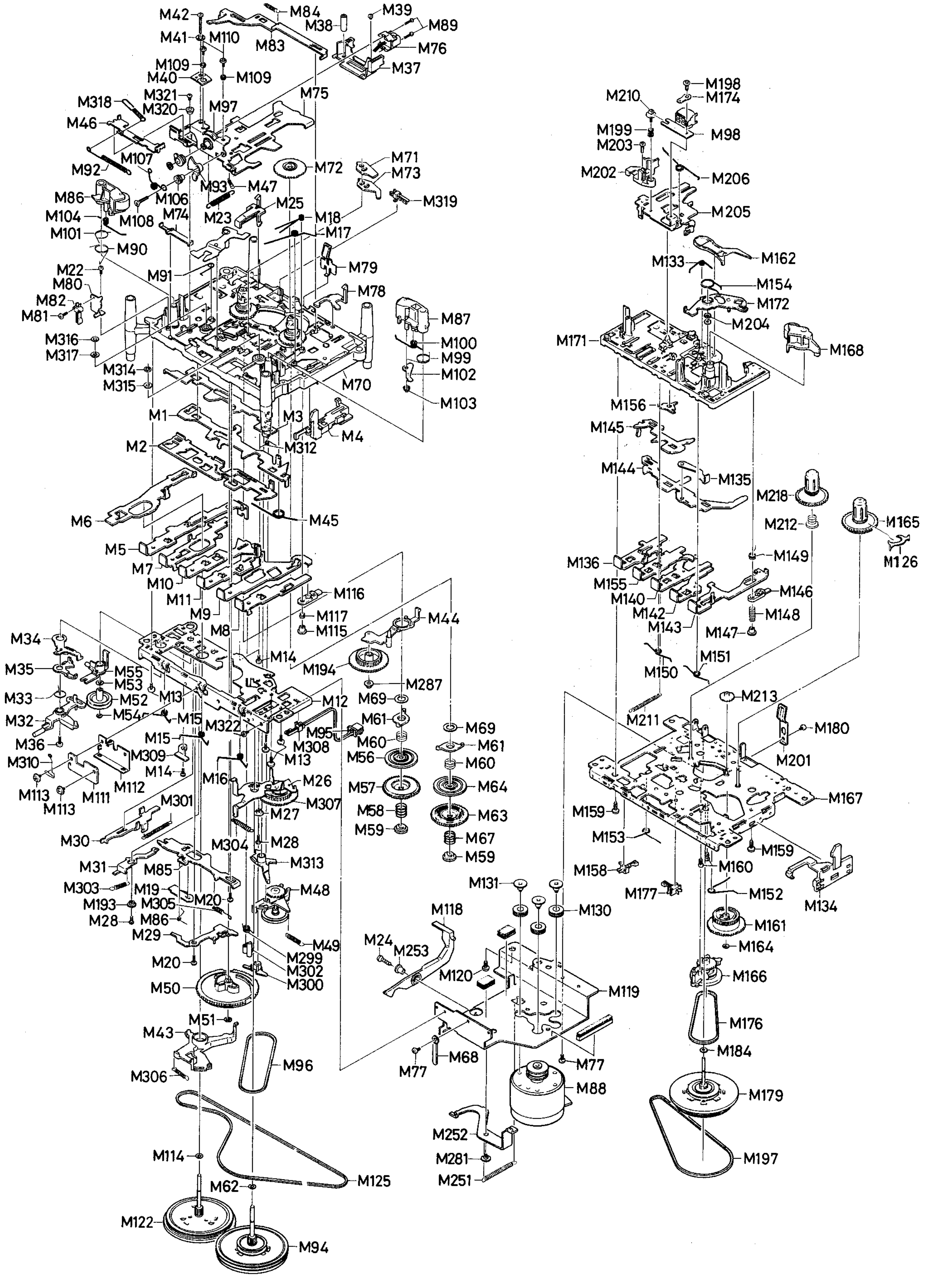
EXPLODED VIEW (TAPE MECHANISM)



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PARTS LIST (TAPE MECHANISM)

MECHANISM

Ref. No.	Part No.	Description
M1	614 227 5474	SLIDE, SW
M2	614 224 5255	SLIDE, LOCK
M3	614 195 8781	SLIDE, R/F
M4	614 195 8699	SLIDE, EJECT
M5	614 209 8486	SLIDE, REC
M6	614 195 8743	SLIDE, PLAY
M7	614 209 8493	SLIDE, MR
M8	614 209 8455	SLIDE, STOP
M9	614 210 7331	SLIDE ASSY
M10	614 209 8479	SLIDE, REW
M11	614 209 8462	SLIDE, FF
M12	614 195 8873	BRACKET SLIDE
M13	411 021 0809	SCR S-TPG BIN 2X6
M14	411 022 7807	SCR S-TPG PAN 2X6
M15	614 200 6535	SPRING WIRE, STOP/PAUSE/REW FF RESET
M16	614 200 6528	SPRING WIRE, R/P RESET
M17	614 200 6542	SPRING WIRE
M18	614 200 6559	SPRING WIRE, SW/R.F SLIDE
M19	614 195 8866	SLIDE, KICK LEVER
M20	412 031 2104	SPECIAL SCREW
M22	411 022 7500	SCR S-TPG PAN 2X4
M23	614 200 6450	SPRING COIL
M24	411 028 3308	SCR S-TPG PAN 2X8
M25	614 195 8880	LEVER, MISS REC A
M26	614 205 3690	LEVER ASSY
M27	614 205 6295	PIPE
M28	411 121 9900	SCR TPG PAN PCS 1.7X6
M29	614 205 3706	LEVER ASSY, A/B LEVER
M30	614 195 8828	SLIDE
M31	614 195 9054	LEVER, MANUAL REVERSE SW
M32	614 195 8903	LEVER, MODE CHANGE
M33	614 200 6580	SPRING WIRE
M34	614 195 9030	LEVER (R/F)
M35	614 195 9023	LEVER (A/B)
M36	412 031 2104	SPECIAL SCREW
M37	614 197 1643	TAPE GUIDE
M38	614 198 2724	PIPE, PROTECTOR
M39	411 038 8904	SCR PAN 2X2, TAPE GUIDE
M40	614 211 9341	BRACKET-M, PROTECTOR
M41	411 086 9205	WASHER IN TW 2
M42	411 002 4703	SCR PAN 2X16, PROTECTOR
M43	614 195 8910	LEVER, TRIGGER
M44	614 195 8941	LEVER
M45	614 200 6597	SPRING WIRE, PLAY SLIDE RESET
M46	614 205 3669	SLIDE ASSY
M47	614 200 6436	SPRING COIL, ROCK LEVER
M48	614 205 3676	LEVER ASSY
M49	614 200 6399	SPRING COIL
M50	614 195 8606	GEAR, D, G
M51	412 031 1503	SPECIAL WASHER
M52	614 195 8644	PULLEY
M53	412 012 6701	SPECIAL WASHER
M54	412 022 0607	SPECIAL WASHER, PULLEY FIX
M55	614 207 7665	LEVER, MODE CHANGE
M56	614 197 7737	PULLEY
M57	614 205 3638	GEAR ASSY
M58	614 209 0251	SPRING COIL, TUT
M59	614 195 9108	BRACKET SPRING
M60	614 200 6481	SPRING COIL
M61	614 195 8972	LEVER, SENSOR
M62	412 031 1701	SPECIAL WASHER
M63	614 195 8552	GEAR
M64	614 205 3645	PULLEY ASSY
M67	614 200 6498	SPRING COIL, TUT
M68	614 129 9341	LUG, LEAD FIX
M69	412 012 8606	SPECIAL WASHER, SENSOR THRUST
M70	614 205 3577	CHASSIS ASSY
M71	614 195 9061	LEVER, CUE/REV
M72	614 195 8576	GEAR, FF RELAY
M73	614 205 3683	LEVER ASSY
M74	614 197 1629	SLIDE, DIRECTION DISPLAY
M75	614 215 3222	SLIDE ASSY
M76	614 210 5900	HEAD, R/P
M77	411 028 2905	SCR S-TPG PAN 2X4
M78	614 195 8897	LEVER, MISS REC B
M79	614 195 9139	SPRING PLATE
M80	614 197 1599	BRACKET SWITCH
M81	411 020 1104	SCR PAN PCS 1.7X5, SW FIX
M82	614 195 7104	SWITCH, DIRECTION DISPLAY
M83	614 195 8811	SLIDE, B MISS REC
M84	614 200 6412	SPRING COIL
M85	614 195 8804	SLIDE, KICK LEVER
M86	614 205 3621	LEVER PINCH ROLLER ASSY
M87	614 222 9842	LEVER PINCH ROLLER ASSY
M88	614 205 4703	COMMUTATE MOTOR ASSY
M89	411 124 9204	SCR PAN PCS 1.6X6, HEAD
M90	614 200 6634	SPRING WIRE
M91	614 200 6627	SPRING WIRE
M92	614 200 6405	SPRING COIL
M93	614 195 8613	GEAR, SELECTOR
M94	614 205 3591	FLYWHEEL ASSY
M95	614 223 8073	ASSY, CONNECTOR-S
M96	614 198 1963	SQUARE BELT, SUB
M97	614 205 3584	BRACKET HEAD ASSY
M98	614 208 4069	HEAD, PLAY
M99	614 212 9340	SPRING WIRE
M100	614 200 6504	SPRING WIRE, PINCH WIRE
M101	614 205 4192	SPRING WIRE, PINCH RESET
M102	614 195 9078	LEVER, TIMER LEVER
M103	614 222 9897	SPRING COIL, LEVER FIX
M104	614 200 6511	SPRING WIRE
M106	614 201 3175	PIPE, GEAR FIX
M107	614 200 6573	SPRING WIRE, CLICK
M108	411 002 1702	SCR FLT 2X8
M109	614 201 0624	SPRING COIL, AZIMUTH
M110	412 031 2005	SPECIAL SCREW, AZIMUTH
M111	614 224 4647	P.C BOARD
M112	614 207 7627	BRACKET-E, NOISE
M113	411 048 4507	SCR PAN+FLG 2X3, PCB FIX
M114	412 012 7104	SPECIAL WASHER
M115	614 197 2954	PIPE
M116	614 197 2978	LEVER, PAUSE LOCK
M117	614 201 3182	SPRING COIL
M118	614 195 8989	LEVER, CONT. PLAY
M119	614 195 8415	BRACKET MOTOR
M120	411 021 2704	SCR S-TPG BIN 2.6X6
M121	614 204 5299	LEVER, PAUSE
M122	614 205 3607	FLYWHEEL ASSY, REVERSE
M123	412 012 7609	SPECIAL WASHER, 3.1X5.4X0.25
M124	614 195 8620	GEAR
M125	614 198 1956	SQUARE BELT, MAIN
M126	614 204 8771	LEVER, SENSOR
M127	614 209 3849	SWITCH, LEAF, AUTO CROM SWATTCH
M128	412 023 0903	SPECIAL SCREW, SW FIX
M130	614 126 6831	CUSHION
M131	412 026 1907	SPECIAL SCREW
M132	614 200 6566	SPRING WIRE, KICK LEVER RESET
M133	614 152 1299	SPRING WIRE, M CONT, SPRING
M134	614 140 1522	LEVER, EJECT SLIDE
M135	614 140 1539	LEVER, E KICK
M136	614 196 0555	LEVER, PLAY BUTTON
M140	614 196 0524	LEVER, FF BUTTON
M142	614 196 0531	LEVER, STOP BUTTON
M143	614 211 3608	LEVER, PAUSE BUTTON
M144	614 205 5403	SLIDE, PUSH BUTTON ACTUATOR
M145	614 201 1744	SLIDE, SWITCH ACTUATOR
M146	614 211 3615	LEVER, PAUSE
M147	614 129 0669	BOSS, PAUSE STOPPER
M148	614 151 7186	SPRING COIL, PAUSE LEVER
M149	614 152 1244	SPRING WIRE, P CONTROL
M150	614 152 1251	SPRING WIRE
M151	614 152 1268	SPRING WIRE
M152	614 152 1275	SPRING WIRE, E ACTUATOR
M153	614 152 1282	SPRING WIRE, P.S. LEVER

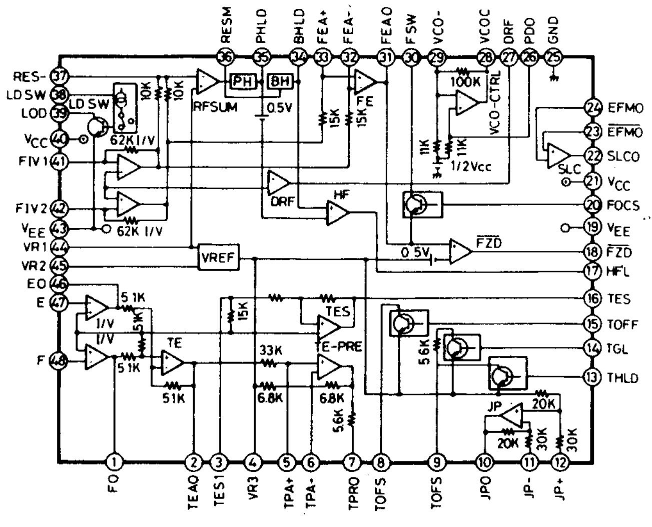
PARTS LIST (TAPE MECHANISM)

Ref. No.	Part No.	Description
M154	614 151 8312	SPRING PLATE, GEAR PLATE
M155	614 196 0517	LEVER, REW BUTTON
M156	614 129 0676	BOSS, PR STOPPER
M158	614 024 1693	SWITCH
M159	412 026 2201	SPECIAL SCREW, M2X5
M160	412 026 2300	SPECIAL SCREW, M2X4.5
M161	614 134 9053	GEAR, CAM
M162	614 140 1614	LEVER, SENSING
M164	412 013 5000	SPECIAL WASHER, 1.2X3.8X0.3
M165	614 204 5701	REEL ASSY, TAKE UP
M166	614 204 5732	PULLEY ASSY, RF CLUTCH
M167	614 067 2770	CHASSIS ASSY
M168	614 210 3302	LEVER PINCH ROLLER ASSY
M169	614 205 6486	CUSHION
M170	614 205 6493	CUSHION
M171	614 067 3258	SUB CHASSIS ASSY
M172	614 070 0916	LEVER ASSY, GEAR PLATE
M174	614 208 0276	LUG, FOR EARTH
M176	614 204 8740	SQUARE BELT, RF
M177	614 204 8542	SWITCH, LEAF
M179	614 204 8672	FLYWHEEL ASSY
M180	412 026 2102	SPECIAL SCREW, M2X3
M184	412 026 2508	SPECIAL WACHER, 2X3.5X0.3
M193	614 201 3168	PIPE
M194	614 195 8590	GEAR
M197	614 133 4127	SQUARE BELT, MAIN
M198	412 031 6607	SPECIAL SCREW, M2X3
M199	614 151 7162	SPRING COIL, AZIMUTH
M201	614 151 8299	SPRING PLATE, PACK SPRING
M202	614 146 5111	BRACKET TAPE GUIDE, HEAD BASE
M203	412 026 1501	SPECIAL SCREW, M2X6
M204	412 026 1808	SPECIAL WASHER, 1.45X3.8X0.5
M205	614 211 6944	SLIDE, HEAD PANEL
M206	614 210 3432	SPRING WIRE, PANEL P
M210	412 026 1709	SPECIAL SCREW, AZIMUTH, M2X7
M211	614 151 4703	SPRING COIL, PLATE BUTTON LEVER
M212	614 151 7179	SPRING COIL, BACK TENSION
M213	614 134 9046	GEAR, FF
M218	614 204 5695	REEL ASSY, SUPPLY
M251	614 200 6467	SPRING COIL
M252	614 195 9085	LEVER, CONT. PLAY
M253	614 200 6245	PIPE
M281	412 005 8101	SPECIAL SCREW, CONT LEVER
M287	614 204 6432	PIPE, GEAR FIX
M299	614 200 6610	SPRING WIRE
M300	614 195 8958	LEVER, END READY
M301	614 200 6429	SPRING COIL
M302	614 195 8965	LEVER, END CANCEL
M303	614 200 6368	SPRING COIL
M304	614 200 6443	SPRING COIL
M305	614 200 6382	SPRING COIL, KICK LEVER RESET
M306	614 200 6375	SPRING COIL
M307	614 195 8583	GEAR
M308	614 213 5532	SWITCH, LEAF, MAIN SW
M309	614 204 5282	BRACKET, MOTOR LEVER
M310	614 200 6641	SPRING WIRE, FIX
M312	614 200 6603	SPRING WIRE
M313	614 195 8927	LEVER, END DETECT
M314	412 012 7005	SPECIAL WASHER
M315	412 014 3005	SPECIAL WASHER
M316	412 029 8200	SPECIAL WASHER
M317	412 034 4709	SPECIAL WASHER
M318	614 207 6903	SPRING, TENS, R HEAD BRACKET
M319	614 222 7954	SWITCH, LEAF, PAUSE
M320	614 207 6897	PIPE
M321	411 102 3002	SCR TPG PAN PCS 1.7X4
M322	411 002 4901	SCR PAN 2X4

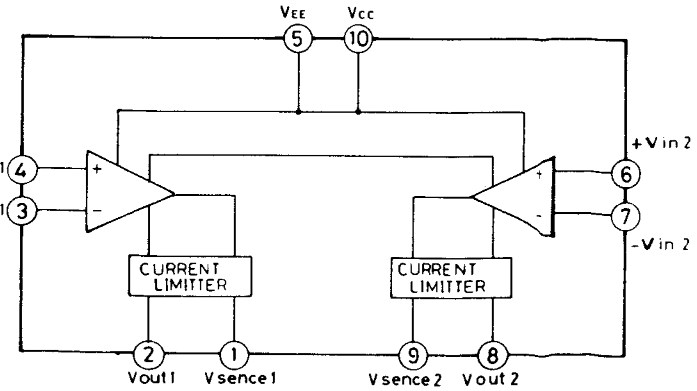
IC BLOCK DIAGRAM

<CD SECTION>

IC1101 LA9200NM (RF Amplifier & Servo System)



IC1201·1202 LA6510 (Dual Operational Amplifier)



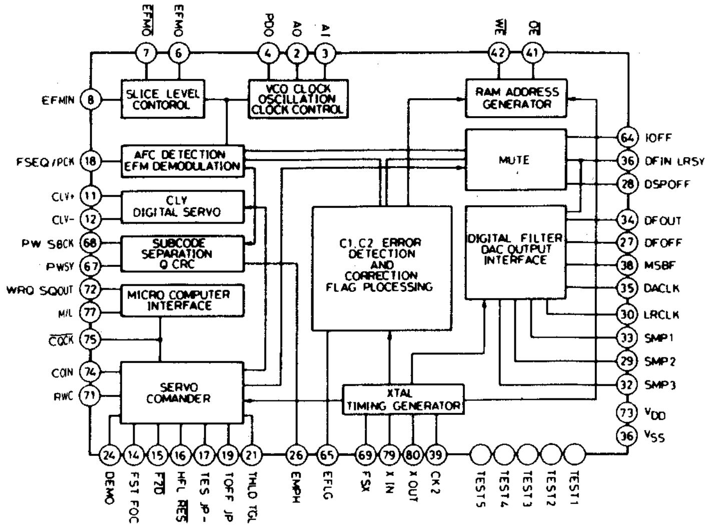
IC BLOCK DIAGRAM

IC1301 Pin Function of CXP5046H-225s (Micro Processor)

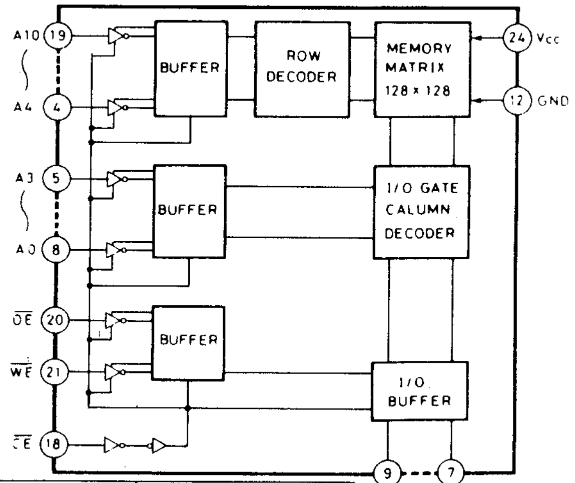
No	Pin Name	Description
1	IR	Remote control signal input
2	IR	Remote control signal input
3	REC SW	Deck REC signal input (ON / OFF)
4	DIR SW	Deck REC REW / FWD signal input (A / B)
5	SYNC	Syncro REC signal output
6	NC	(PULL UP)
7	NC	(PULL UP)
8	NC	(PULL UP)
9	NC	(PULL UP)
10	SCAN0	Key & Display scan output
11	SCAN1	Key & Display scan output
12	SCAN2	Key & Display scan output
13	SCAN3	Key & Display scan output
14	KEY0	Key input
15	KEY1	Key input
16	KEY2	Key input
17	KEY3	Key input
18	SEG F	LED Display Segment Output
19	SEG A	LED Display Segment Output
20	SEG B	LED Display Segment Output
21	SEG G	LED Display Segment Output
22	SEG H	LED Display Segment Output
23	SEG C	LED Display Segment Output
24	SEG D	LED Display Segment Output
25	SEG E	LED Display Segment Output
26	NC	
27	NC	
28	NC	
29	NC	
30	CLV G	CLV Gain control
31	NC	
32	VSS	GND

No	Pin Name	Description
33	LDON	Laser ON / OFF output
34	CLOSE	Tray control motor output
35	OPEN	Tray control motor output
36	XTAL	Oscillator output
37	EXTAL	Oscillator input
38	RST	DRF input from LA9200NM
39	CQCK	Clock Output to LC7860k
40	COIN	COIN input from LC7860K
41	NC	
42	SQOUT	SUBQ data input from LC7860k
43	RWC	RWC Output to LC7860k
44	NC	
45	WRQ	WRQ input from LC7860K
46	DRF	DRF input from LA9200NM
47	NC	
48	CMOPN	Open SW input (ON / OFF)
49	LIMIT	Pick-up Limit SW input (ON / OFF)
50	NC	
51	NC	
52	NC	(PULL UP)
53	NC	(PULL UP)
54	NC	(PULL UP)
55	NC	(PULL UP)
56	SL OP	Tray control motor output (SLED)
57	SL O	Tray control motor output (SLED)
58	NC	
59	SL C	Tray control motor output (SLED)
60	NC	
61	NC	
62	NC	
63	NC	
64	VDD	+5V

IC1401 LA7860K (Digital Signal Processor)


EFMO
EFMO
PDO
AO
AI
WE
OE
7
6
4
2
3
42
41
EFMIN 8
SLICE LEVEL CONTOROL
VCO CLOCK OSCILLATION CLOCK CONTROL
RAM ADDRESS GENERATOR
FSEQ/PCK 18
AFC DETECTION EFM DEMODULATION
MUTE
CLV+ 11
CLV- 12
CLY DIGITAL SERVO
PW SBCK 68
PWSY 67
SUBCODE SEPARATION Q CRC
WRQ SQOUT 72
M/L 77
MICRO COMPUTER INTERFACE
CQCK 75
COIN 74
RWC 71
SERVO COMANDER
C1.C2 ERROR DETECTION AND CORRECTION FLAG PLOCESSING
DIGITAL FILTER DAC OUTPUT INTERFACE
XTAL TIMING GENERATOR
64 IOFF
36 DFIN LRSY
28 DSPOFF
34 DFOUT
27 DFOFF
38 MSBF
35 DACLK
30 LRCLK
33 SMP1
29 SMP2
32 SMP3
73 VDD
36 VSS
24 DEMO
14 FST FOCS
15 FZD
16 HFL RES
17 TES JP-
19 TOFF JP+
21 THLD TGL
26 EMPH
65 EFLG
69 FSX
79 X IN
80 X OUT
39 CK2
TEST5
TEST4
TEST3
TEST2
TEST1

IC1402 LC3517BS-15 (Static Random Access Memory) 5k-word × 8-bit High-speed C-MOS


A10 19
A4 4
A3 5
A0 8
OE 20
WE 21
CE 18
BUFFER
BUFFER
BUFFER
ROW DECODER
MEMORY MATRIX 128 × 128
I/O GATE CALUMN DECODER
I/O BUFFER
24 Vcc
12 GND
9
7
I/O1 ~ I/O8

TERMINAL NAME	TERMINAL DESCRIPTION
A0 ~ A10	ADDRESS INPUT
I/O1 I/O8	DATA INPUT / OUTPUT
$\overline{CE}$	CHIP ENABLE INPUT
$\overline{WE}$	WRITE ENABLE INPUT
$\overline{OE}$	OUTPUT ENABLE INPUT
Vcc	+5V POWER SOURCE
GND	GROUND

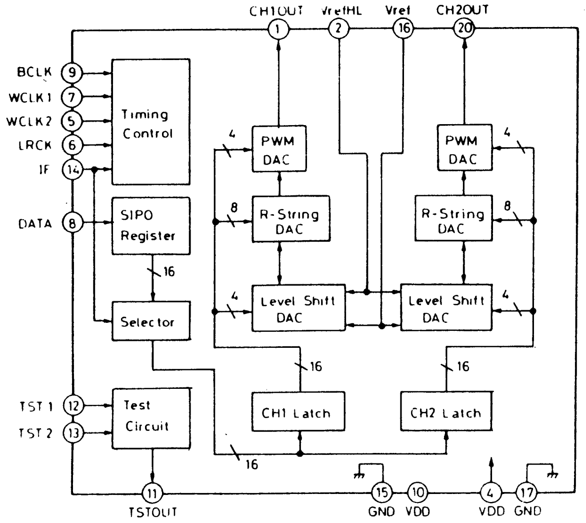
IC BLOCK DIAGRAM

IC1401 Pin Function of LC7860K (Digital Signal Processor)

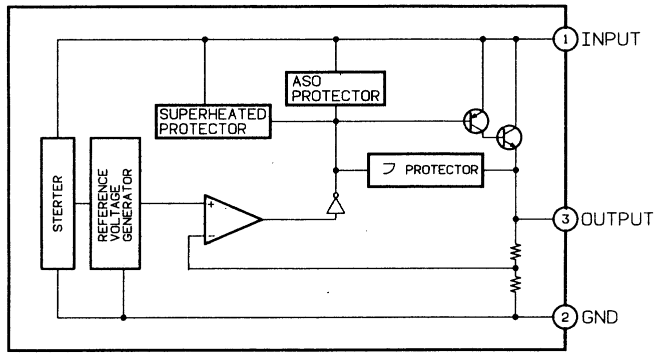
Pin No	Pin Name	I/O	Functions	
1	TEST1	I	–	Test pin. Normally not connected.
2	AO	O	–	VCO is generated by connecting resonance circuit between AI and AO. (8.6436MHz) is phase output with EFM signal, and is set to increase frequency when +".
3	AI	I	–	
4	PDO	O	–	
5	Vss	–	–	GND
6	EFMO	O	–	1 to 2Vpp HF signal is input to EFMIN. Output from EFMO and BFMO passes through amplitude limiter and reverse phase EFM signal is obtained from both. This performs slice level control.
7	$\overline{\text{EFMO}}$	O	–	
8	EFMIN	I	–	
9	TEST2	I	–	Test pin. Normally not connected.
10	VDD	-	–	+5V
11	CLV+	O	–	Disk motor control output
12	CLV–	O	–	
13	FOCS	O	–	Focus servo is off when FOCS is HIGH. The lens is lowered by FST and then FST is HIGH, the lens is gradually pulled up. FOCS is reset when FZD is generated. For focus-in.
14	FST	O	–	
15	FZD	I	–	
16	HFL	I	*1	*1 Kick pulses, JP+ and JP–, are generated according to track jump command. A jump of the prescribed number of tracks is (1, 4, 16 64). *2 When 4.3218MHz PCK monitor terminal/DEMO is HIGH both SYNC detected from EFM signal and SYNC of counter are the same at HIGH.
17	TES	I	*1	
18	FSEQ/PCK	O	*2	
19	TOFF	O	*1	
20	TGL	O	*1	
21	THLD	O	*1	
22	JP+	O	*1	
23	JP–	O	*1	
24	DEMO	I	–	Set and sount output adjustment pin function.
25	TEST3	I	–	Test pin. Normally not connected.
26	EMPH	O	–	De-emphasis is necessary when HIGH.
27	DFOFF	I	–	ON/OFF switch for digital filter. No filtering when HIGH.
28	DSPOFF	I	–	Test pin Normally not connected.
29	SMP2	O	*3	*3 Signal output to DAC and signal for L/R switching and sample hold. *4 +5V *5 Signal output for CDROM *6 CDROM sync signal
30	LRCLK	O	*3	
31	VDD	–	*4	
32	SMP3	O	*3	
33	SMP1	O	*3	
34	DFOUT	O	*3	
35	DACLK	O	*3	
36	DFIN	I/O	*5	
37	LRSY	O	*6	
38	MSBF	I	*3	
39	CK2	O	–	2.1609MHz
40	AD10	O	*7	*7 RAM address output *8 Output state when WE = L and input state when WE = H. OE is for input/outptu control.
41	AD10	O	*8	
42	OE	O	*8	
43	AD9	O	*7	
44	AD8	O	*7	*7 RAM address output *8 Output state when WE = L and input state when WE = H. OE is for input/output control.
45	AD7	O	*7	
46	AD6	O	*7	
47	AD5	O	*7	
48	AD4	O	*7	
49	AD3	O	*7	
50	AD2	O	*7	
51	AD1	O	*7	
52	AD0	O	*7	
53	DB7	I/O	*9	*9 DB7 to DB0: connected to RAM data pins. *10 GND
54	DB6	I/O	*9	
55	DB5	I/O	*9	
56	Vss	–	*10	
57	DB4	I/O	*9	
58	DB3	I/O	*9	
59	DB2	I/O	*9	
60	DB1	I/O	*9	
61	DB0	I/O	*9	
62	TEST4	I	–	Test pin. Normally not connected.
63	TEST5	I	–	
64	IOFF	I	–	For CD ROM. HIGH time interpolation and holding of previous value not performed.
65	EFLG	O	–	C1/C2 1-level and 2-level error correction
66	PW	O	–	PWSY is SYNC combining main and sub and change from HIGH to LOW is taken externally. The P, Q, R, S, T, U, V, and W subcodes are read by sending 8 clock pulses to SBCK.
67	PWSY	O	–	
68	SBCK	I	–	
69	FSX	O	–	7.35kHz sync signal output
70	WRQ	O	*11	*11 WRQ goes HIGH when data of subcode Q passes CRC check. This is taken externally and the data from SQOUT is read by sending CQCK. When data is required with LSB first, M/L is driven LOW. After the microprocessor sets RWC to HIGH, the command is given by output synchronized with the CQCK command data. *12 Goes LOW once when power is turned on.
71	RWC	I	*11	
72	SQOUT	O	*11	
73	VDD	–	*11	
74	COIN	I	*11	
75	CQCK	I	*11	
76	RES	I	*12	
77	M/L	I	*11	
78	Vss	–	–	GND
79	XIN	I	–	Pin for connection to 8.6436MHz crystal oscillator
80	XOUT	O	–	

IC BLOCK DIAGRAM

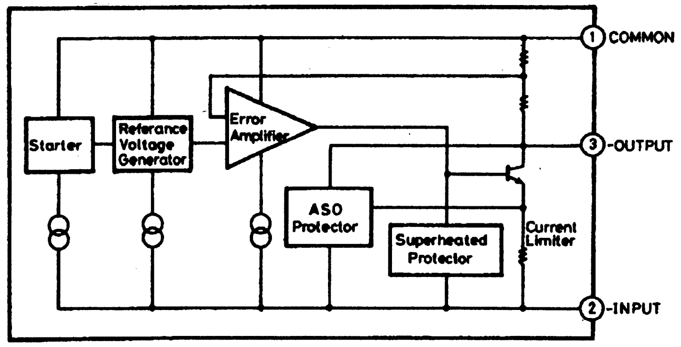
IC1501 LC7881 (16-Bit D/A Converter)


CH1OUT
VrefHL
Vref
CH2OUT
BCLK
WCLK1
WCLK2
LRCK
IF
DATA
Timing Control
SIPO Register
Selector
PWM DAC
R-String DAC
Level Shift DAC
CH1 Latch
CH2 Latch
Test Circuit
TST1
TST2
TSTOUT
GND VDD
VDD GND
16
8
4

IC1601 M5278D05 (3 Terminal Voltage Regulator)

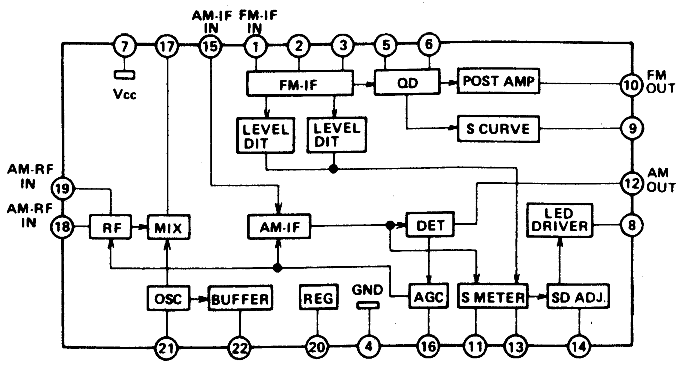

INPUT
OUTPUT
GND
ASO PROTECTOR
SUPERHEATED PROTECTOR
PROTECTOR
STERTER
REFERENCE VOLTAGE GENERATOR

IC1602 AN79N05 (3 Terminal Voltage Regulator)


COMMON
OUTPUT
INPUT
Starter
Referance Voltage Generator
Error Amplifier
ASO Protector
Superheated Protector
Current Limiter

<TUNER SECTION>

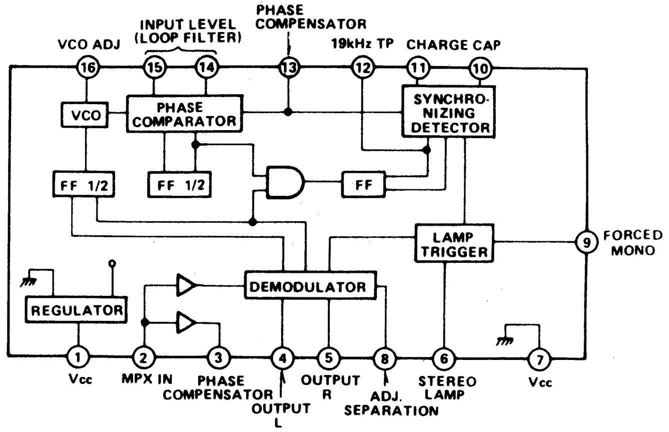
IC201 LA1265S (Tuner System)


AM-IF IN
FM-IF IN
Vcc
FM-IF
QD
POST AMP
FM OUT
LEVEL DIT
LEVEL DIT
S CURVE
AM OUT
AM-RF IN
AM-RF IN
RF
MIX
AM-IF
DET
LED DRIVER
OSC
BUFFER
REG
GND
AGC
S METER
SD ADJ.

Pin Function of IC1501 (LC7881)

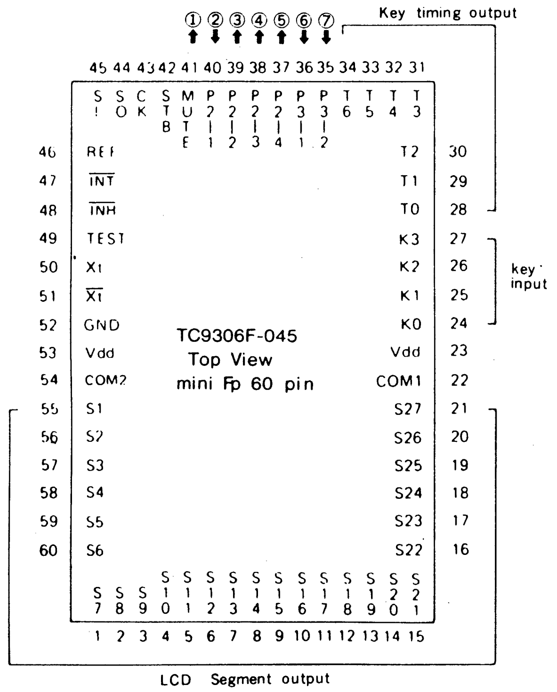
No	Pin Name	Description
1	CH1 OUT	Output Terminal of CH-1
2	VrefH	Input Terminal of Reference Voltage "H"
3	NC	No Connection
4	VDD	+5V Power Supply Terminal
5	WCLK2	Input Terminal of Word-Clock 2. When IF is in "L", internal signal for latching CH-1 data of digital signal is made by using trailing edge WCLK2. When IF is in "H", it needs WCLH2 is in "L".
6	LRCK	Input Terminal of LR Clock. Indicates CH-1 and CH-2 of input digital audio data : indicate CH1 when LRCK is in "H". indicate CH2 when LRCK is in "L".
7	WCLK2	Input Terminal of Word-Clock 1. When IF is in "L", internal signal for latching CH-2 data of digital signal is made by using trailing edge WCLK1. When IF is in "H", internal signal for latching CH-1 and CH-2 data of digital signal is made by using trailing edge WCLK1.
8	DATA	Input Terminal of digital audio data. When IF is in "L", digital audio data is input in bit serial from LSB. When IF is in "H", digital audio data is input in bit serial from MSB.
9	BCLK	Bit-Clock Terminal. This clock is for reading digital audio data into LSI in bit serial and is for PWMDAC.
10	VDD	+5V Power Supply Terminal
11	TSTOUT	Output Terminal for Testing. Ordinarily, leave this terminal open.
12	TST1	Input Terminal for Testing. Ordinarily, ground these terminals.
13	TST2	Input Terminal for Testing. Ordinarily, ground these terminals.
14	IF	Interface Select Terminal. When IF is in "L", digital audio data is input from LSB side. When IF is in "H", digital audio data is input from MSB side.
15	GND	Ground Terminal
16	VrefL	Input Terminal of Reference Voltage "L".
17	GND	Ground Terminal
18	NC	No Connection
19	NC	No Connection
20	CH2OUT	Output Terminal of CH2.

IC301 LA3361 (PLL FM MPX. Stereo Demodulator)


VCO ADJ
INPUT LEVEL (LOOP FILTER)
PHASE COMPENSATOR
19kHz TP
CHARGE CAP
VCO
PHASE COMPARATOR
SYNCHRONIZING DETECTOR
FF 1/2
FF 1/2
FF
LAMP TRIGGER
FORCED MONO
REGULATOR
DEMODULATOR
Vcc
MPX IN
PHASE COMPENSATOR
OUTPUT L
OUTPUT R
ADJ. SEPARATION
STEREO LAMP
Vcc

IC BLOCK DIAGRAM

IC401 TC9306F-045-BS (Frequency Synthesizer System)


Key timing output
TC9306F-045
Top View
mini Fp 60 pin
REF
INT
INH
TEST
X1
X1
GND
Vdd
COM2
COM1
S1
S2
S3
S4
S5
S6
T2
T1
T0
K3
K2
K1
K0
S27
S26
S25
S24
S23
S22
key input
LCD Segment output

System Summary (TC9306F-045)

Combined with PLL LSI TC9172AP, high efficiency digital tuning system with FM/MW 2-band can be made.

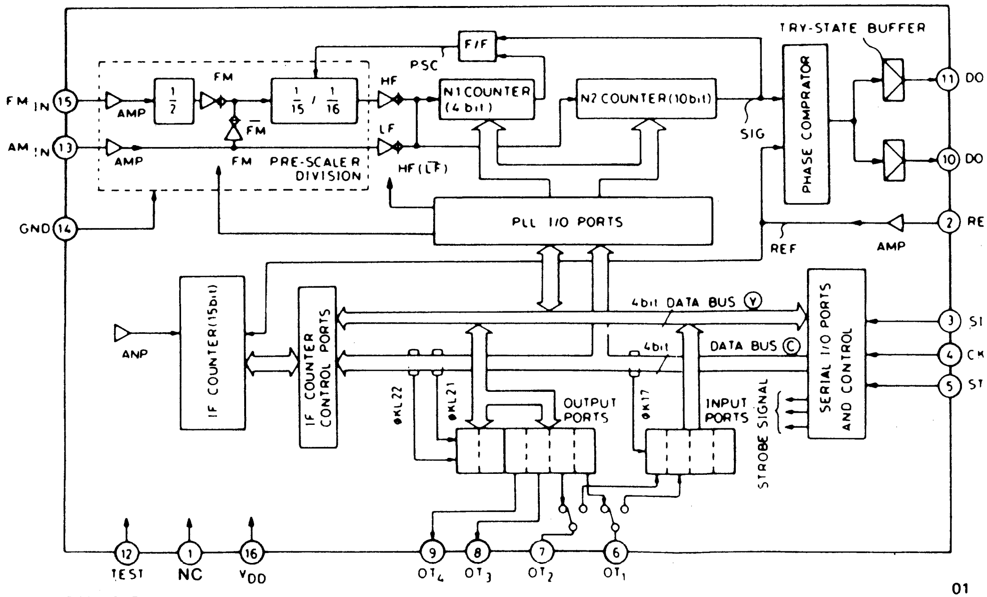
BAND

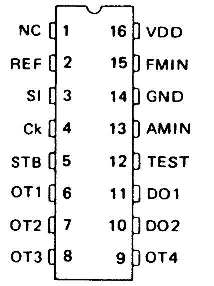
BAND	CODE A B	FREQUENCY (Hz)	STEP (Hz)	Fref (Hz)	IF (Hz)
FM	0 0	87.9 ~ 107.9 M	200K	25K	+10.7M
	1 0	87.50 ~ 108.00 M	50K		
	0 1	76.0 ~ 90.0 M	100K		10.7M
	1 1	65.0 ~ 108.0M	50K		+10.7M
MW	0 0	530 ~ 1700 K	10K	10K	+450K
	1 0	531 ~ 1602 K	9K	9K	
	0 1	522 ~ 1611 K			+459K
	1 1	522 ~ 1629 K			+450K
LW	1	144 ~ 290 K	AUTO MANU 9K/1K	1K	+459K
SW1	1 –	3.2 ~ 7.3 M	5K	5K	+450K
SW2	– 1	9.5 ~ 21.75 M			

TC9306F-045

PORT	No	NAME	FUNCTION	ACTIVE	FIRST SETTING
MUTE	41	MUTE	MUTE OUTPUT	H	H
P2-1	40	REM.DATA	REMOTE INPUT	H	–
P2-2	39	VR UP	VR UP OUTPUT	H	L
P2-3	38	VR DOWN	VR DOWN OUTPUT	H	L
P2-4	37	AUTO/MANUAL	AUTO OUTPUT	H	L
P3-1	36	TUNED/SD	TUNED & SD INPUT	L	–
P3-2	35	STEREO	STEREO INPUT	L	–

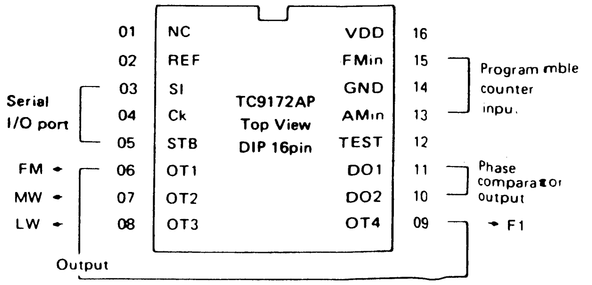
IC402 TC9172AP (High-Speed PLL with Pre-Scaler)


TRY-STATE BUFFER
FM IN
AM IN
GND
AMP
AMP
FM
PSC
F/F
HF
LF
N1 COUNTER (4 bit)
N2 COUNTER (10 bit)
PHASE COMPARATOR
SIG
DO1
DO2
REF
AMP
FM PRE-SCALER DIVISION
HF (LF)
PLL I/O PORTS
REF
4bit DATA BUS
DATA BUS
IF COUNTER (15bit)
IF COUNTER CONTROL PORTS
OUTPUT PORTS
INPUT PORTS
STROBE SIGNAL
SERIAL I/O PORTS AND CONTROL
SI
CK
STB
ANP
TEST
NC
VDD
OT4
OT3
OT2
OT1


NC 1
REF 2
SI 3
Ck 4
STB 5
OT1 6
OT2 7
OT3 8
16 VDD
15 FMIN
14 GND
13 AMIN
12 TEST
11 DO1
10 DO2
9 OT4

TC9172AP

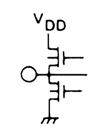
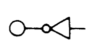
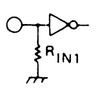
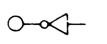
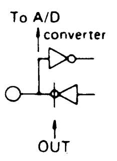
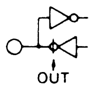
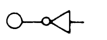
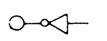
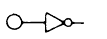
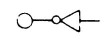
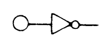
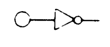
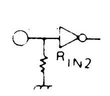
PORT	NO	NAME	FUNCTION	ACTIVE	FIRST SETTING
OT 1	06	FM	FM BAND OUTPUT	H	H
OT 2	07	MW	MW OUTPUT	H	L
OT 3	08	LW	LW BAND OUTPUT	H	L
OT 4	09	F1	F1 OUTPUT	H	L


01 NC
02 REF
03 SI
04 Ck
05 STB
06 OT1
07 OT2
08 OT3
VDD 16
FMin 15
GND 14
AMin 13
TEST 12
DO1 11
DO2 10
OT4 09
TC9172AP
Top View
DIP 16pin
Serial I/O port
FM
MW
LW
Output
Programmable counter input
Phase comparator output
F1

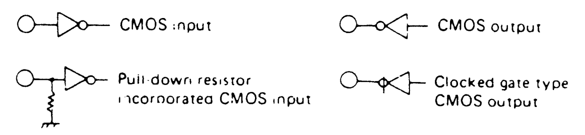
IC BLOCK DIAGRAM

Pin Function of TC9306F-045

Explanation of terminal functions

Pin No.	Symbol	Terminal name	Description of function and operation	Remarks
22 54	COM1 COM2	LCD common output	Terminal to output common signal output to LCD It is possible to indicate max. 54 segments by using the matrix S1·S27. At this terminal, three levels of V_{DD}, 1/2 V_{DD} and GND are outputted with intervals of 5 ms at a frequency of 50 Hz. Note: During system resetting or when CKSTP command is executed, output is automatically set to "L" level.	
55~60 1~21	S_1~S_6 S_7~S_{27}	LCD segment output	Terminal to output segment signal output to LCD. It is possible to indicate max. 54 segments by using the matrix COM1 and COM2. Data is outputted to these terminals by SEG command (COM1 system) and MARK command (COM2 system). For segment decoding, the decode pattern is made in the ROM area, and it is executed by using the DAL command. Note: During system resetting or when CKSTP command is executed, output is automatically set to "L" level.	
24~27	K_0~K_3	Key input port	4-bit input port for key matrix input. When KEY command which assigns this port at the operand part is executed, data of these terminals are read in to RAM. All the terminals incorporate pull-down resistor. The output ports of T_0·T_6 are normally used for key return timing signal output.	
28~34	T_0~T_6	Key timing output port	4-bit (T_0·T_3) or 3-bit (T_4·T_6) output port. These ports are normally used for key return timing signal output of key matrix.	
35 36	P3·2/A/D IN P3·1/DC REF	I/O port 3 A·D/analog voltage input/reference voltage input	2-bit I/O port At this port it is possible to assign input and output per bit. For this assignment, the content of internal port called PORT·3 I/O CONTROL is used. This terminal is also used for analog input of incorporated 4-bit A/D converter. The switching to A/D converter input is controlled according to the content of PORT·3 I/O CONTROL port. The incorporated A/D converter adopts the programmed successive comparison system in which P3·1 is for reference voltage input, and P3·2 is for analog comparison voltage input.	
37~40	P2·4~P2·1	I/O port 2	4-bit I/O port. At this port it is possible to assign input and output per bit. For this assignment, the content of internal port called PORT·2 I/O CONTROL port is used.	
41	MUTE	Muting signal output port	1-bit output port. This port is normally used for muting control signal output. Note: When the $\overline{\text{INH}}$ input is changed from "H" to "L" or "L" to "H", the output is automatically set to "H" level.	
42 43 44 45	STB CK SO SI	Strobo pulse output Serial clock output Serial data output Serial data input	Serial interface By executing the SIO command, the externally mounted PLL LSI or an optional IC of peripheral part can be controlled. The serial transferring mode, $\overline{\text{NCD}}$ or NCD, can be selected as programmed.	 
46	REF	Reference Frequency signal output	Output terminal of reference frequency signal supplied to PLL LSI. It is possible to select one of eight kinds of reference frequency signals (1 kHz, 5 kHz, 9 kHz, 10 kHz, 12.5 kHz, 25 kHz, 50 kHz and 100 kHz) by program. Note: When the $\overline{\text{INH}}$ input is at "L" level, the output is automatically set to "L" level.	
47	$\overline{\text{INT}}$	Initialize input	System reset signal input terminal of device While the $\overline{\text{INT}}$ is at "L" level, resetting is activated. When at "H" level, the program is started from 0 address. Normally, when voltage of 0V~4.5V is applied to V_{DD}, system resetting is activated (power on reset). Therefore, this terminal is used, being set to "H" level. Note: After completion of system resetting, the I/O port is set in input mode. Howerver, since the output state of output port is undefined, it is necessary to initialize the port by using the program as needed.	
48	$\overline{\text{INH}}$	Inhibit input	Select signal input port of radio mode It is judged that radio is set in ON mode when input is at "H" level, and radio is set in OFF mode when input is at "L" level. When this terminal is set in "L" level, REF output is automatically fixed at "L" level. When the CKSTP command is used in the program, and this CKSTP command is executed while $\overline{\text{INH}}$ is at "L" level, the clock generator and CPU stop the operations, and the memory backup state is set by using low current (1 A or below). In this case, all output terminals (indication output, output port, etc.) are set automatically to "L" level. Note: The CKSTP command is effective when $\overline{\text{INH}}$ is at "L" level. If it is executed when $\overline{\text{INH}}$ is at "H" level, the same operation as that of NOOP command is executed.	
49	TEST	Test mode control input	Test mode control input terminal The test mode is set when input is at "H" level, and normal operation is executed in "L" level or NC state. This terminal incorporates a pull down resistor. It is normally at "L" level or in NC state. In test mode, the device acts as an evaluation chip, and can evaluate programs on EP ROM base combining with the externally mounted simulation board.	
50 51	X_T $\overline{X_T}$	Quatz oscillator	Connecting terminal of quatz oscillator 7.2 MHz quatz is connected. When the CKSTP command is executed, oscillation is automatically stopped.	—
52	GND	Ground terminal	Ground terminal of device	—
23 53	V_{DD}	Power-on terminal	Power on terminal of device In normal operation, voltage of 5V ±10% is applied. In backup state (when CKSTP command is executed), a voltage can be reduced to 2V. When voltage of 0V~4.5V is applied to this terminal, system resetting is activated in the device, the program starts from 0 address. (Power on reset) Note: Power-on resetting is executed when $\overline{\text{INH}}$ is in "L" level. Note: Since the content of each port (output port, internal port etc.), when power is connected, is undefined, it is necessary to initialize the content by using to the program as needed.	—

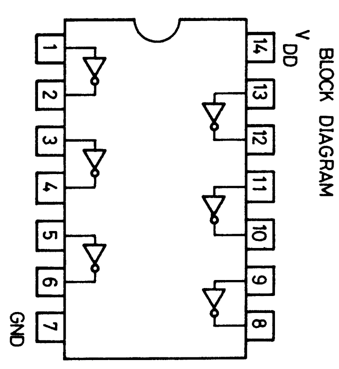
(Supplement)


CMOS input
CMOS output
Pull-down resistor incorporated CMOS input
Clocked gate type CMOS output

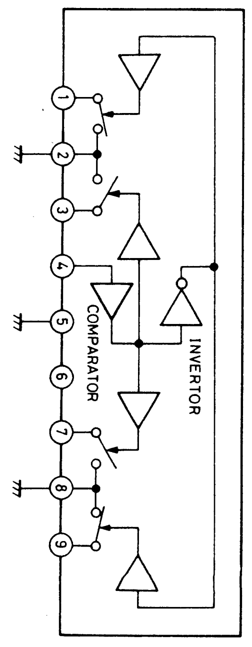
IC BLOCK DIAGRAM

<DECK SECTION>

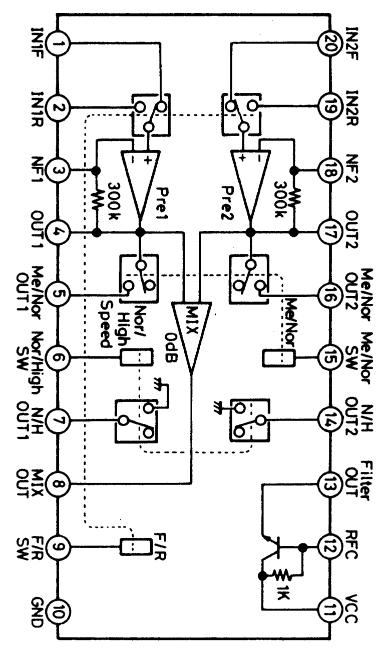
IC001 LA4069UB(Hex Inverter)


BLOCK DIAGRAM
VDD
14
13
12
11
10
9
8
1
2
3
4
5
6
7
GND

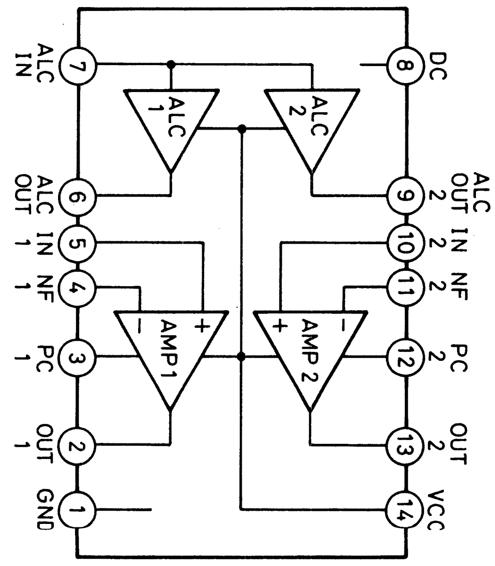
IC502 µPC1330HA (2-Channel Head Select Switch for Tape Deck)


INVERTOR
COMPARATOR
1
2
3
4
5
6
7
8
9

IC501 LA3246(Pre & Mixing Amplifier with Electrical Switch)

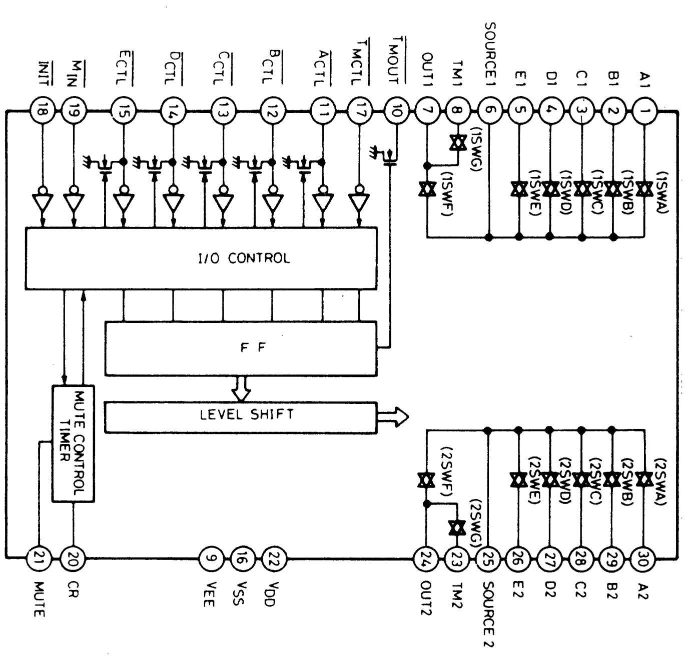

IN2F
IN2R
NF2
OUT2
Me/Nor OUT2
Me/Nor SW
N/H OUT2
Filter OUT
RFC
VCC
20
19
18
17
16
15
14
13
12
11
300k
Me/Nor
1K
Pre2
MIX
0dB
Pre1
Nor/High Speed
300k
F/R
1
2
3
4
5
6
7
8
9
10
IN1F
IN1R
NF1
OUT1
Me/Nor OUT1
Nor/High SW
N/H OUT1
MIX OUT
F/R SW
GND

IC521 LA3220(Dual Pre-Amplifier)

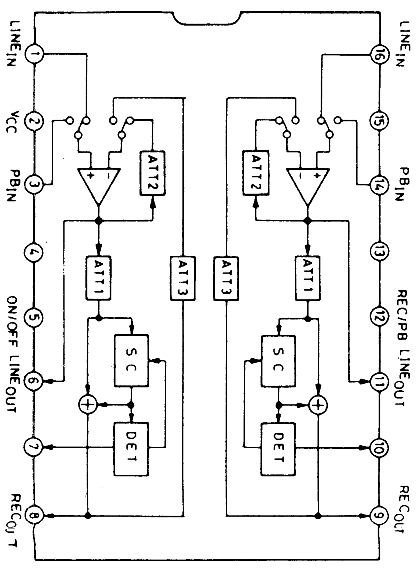

DC
ALC OUT 2
IN 2
NF 2
PC 2
OUT 2
VCC
8
9
10
11
12
13
14
ALC 2
AMP 2
ALC 1
AMP1
7
6
5
4
3
2
1
ALC IN
ALC OUT 1
IN 1
NF 1
PC 1
OUT 1
GND

<AMP. SECTION>

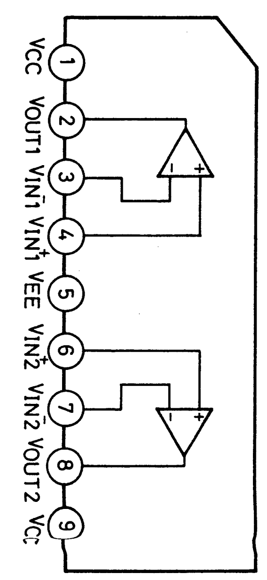
IC702 LC7818(2-Pole 4-Position Analog Function Switch)


A1
B1
C1
D1
E1
SOURCE1
TM1
OUT1
$\overline{\text{TMOUT}}$
$\overline{\text{TMCTL}}$
$\overline{\text{ACTL}}$
$\overline{\text{BCTL}}$
$\overline{\text{CCTL}}$
$\overline{\text{DCTL}}$
$\overline{\text{ECTL}}$
$\overline{\text{MIN}}$
$\overline{\text{INIT}}$
(1SWA)
(1SWB)
(1SWC)
(1SWD)
(1SWE)
(1SWG)
(1SWF)
(2SWA)
(2SWB)
(2SWC)
(2SWD)
(2SWE)
(2SWG)
(2SWF)
A2
B2
C2
D2
E2
SOURCE 2
TM2
OUT2
VDD
VSS
VEE
CR
MUTE
I/O CONTROL
F F
LEVEL SHIFT
MUTE CONTROL TIMER

IC551 CXA1101P(Dolby B-Type Noise Reduction)

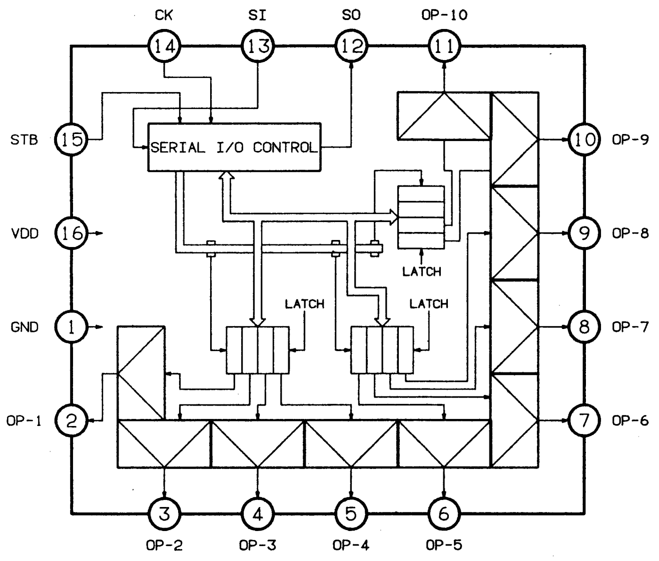

LINE IN
PB IN
REC/PB LINE OUT
REC OUT
16
15
14
13
12
11
10
9
ATT1
ATT2
S C
DET
ATT3
ATT3
ATT2
S C
DET
ATT1
1
2
3
4
5
6
7
8
LINE IN
VCC
PB IN
ON/OFF LINE OUT
REC OUT

IC701·711·712 LA6458S(Dual Operational Amplifier)

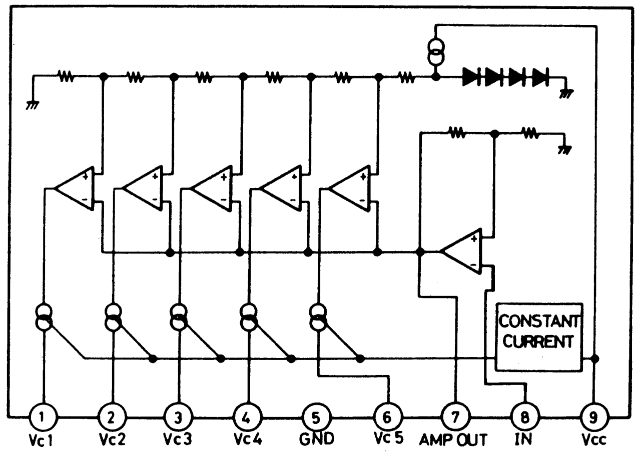

1
2
3
4
5
6
7
8
9
VCC
VOUT1
VIN1−
VIN1+
VEE
VIN2+
VIN2−
VOUT2
VCC

IC BLOCK DIAGRAM

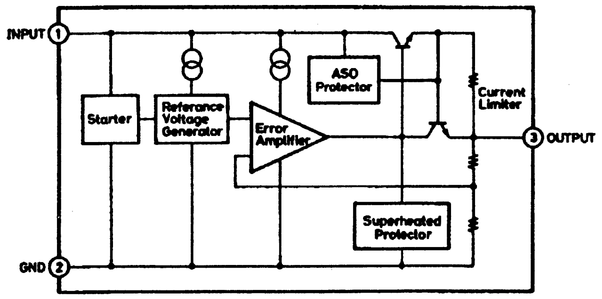
IC703 TC9147P(Inter-face = Extension of I/O Ports)


CK
SI
SO
OP-10
14
13
12
11
STB 15
VDD 16
GND 1
OP-1 2
SERIAL I/O CONTROL
LATCH
LATCH
LATCH
10 OP-9
9 OP-8
8 OP-7
7 OP-6
3 OP-2
4 OP-3
5 OP-4
6 OP-5

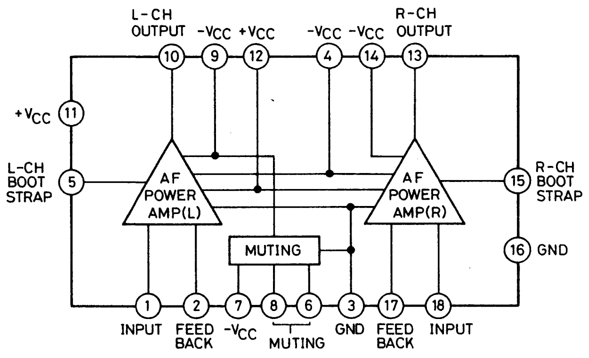
IC761・861 BA6137(LED Level Meter Driver)


CONSTANT CURRENT
1 Vc1
2 Vc2
3 Vc3
4 Vc4
5 GND
6 Vc5
7 AMP OUT
8 IN
9 Vcc

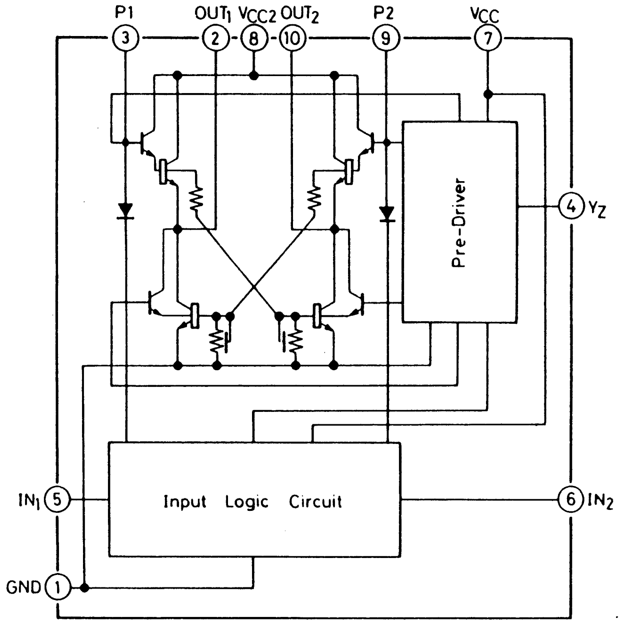
IC903・904 AN7812F(3 Terminal Voltage Regulator)


INPUT 1
GND 2
Starter
Referance Voltage Generator
Error Amplifier
ASO Protector
Current Limiter
Superheated Protector
3 OUTPUT

IC710 STK4132MK2(2-Channel AF Power Amplifier)


L-CH OUTPUT
-VCC
+VCC
-VCC
-VCC
R-CH OUTPUT
10
9
12
4
14
13
+VCC 11
L-CH BOOT STRAP 5
AF POWER AMP(L)
AF POWER AMP(R)
MUTING
15 R-CH BOOT STRAP
16 GND
1 INPUT
2 FEED BACK
7 -VCC
8
6
MUTING
3 GND
17 FEED BACK
18 INPUT

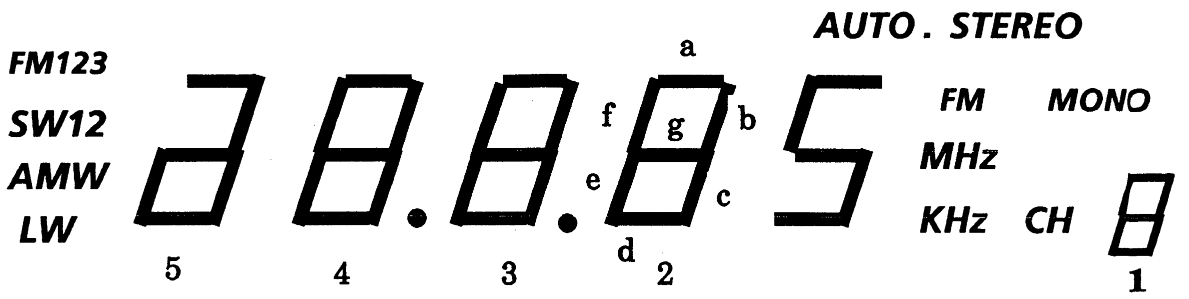
IC961 LB1641 (Motor Driver)


P1
OUT1
VCC2
OUT2
P2
VCC
3
2
8
10
9
7
Pre-Driver
4 YZ
IN1 5
Input Logic Circuit
6 IN2
GND 1

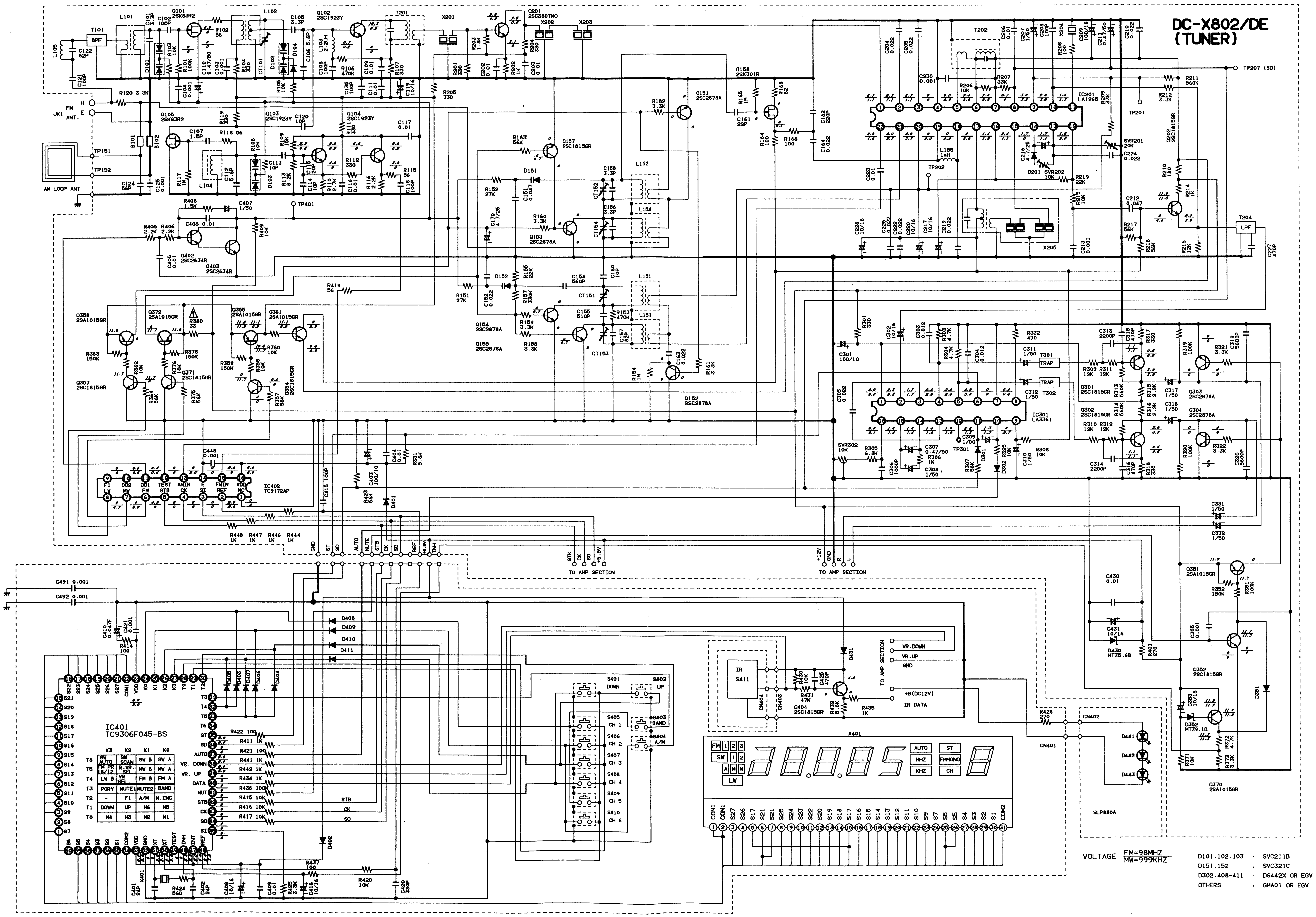
Input		Output		Action
IN_1	IN_2	OUT_1	OUT_2	
0	0	0	0	Brake
1	0	1	0	Normal(Reverse)Rotary
0	1	0	1	Reverse(Normal)Rotary
1	1	0	0	Brake

DISPLAY (LCD) PIN DESCRIPTION

No.	COM.1	COM.2	COM.0
1	-	-	COM.0
2	COM.1	-	-
3	FM	LW	-
4	W	A	M
5	SW	-	-
6	1(SW)	-	-
7	-	2(SW)	-
8	1(FM)	2(FM)	-
9	3(FM)	AUTO	-
10	5b	5c	-
11	-	5adeg	-
12	4f	4b	-
13	4e	4g	-
14	4d	4c	-
15	-	4a	-
16	3f	3b	-
17	3e	3g	-
18	3d	3c	-
19	-	3a	-
20	2f	2b	-
21	2e	2g	-
22	2d	2c	-
23	5	2a	-
24	KHz	MHz	-
25	FM MONO	-	-
26	-	STEREO	-
27	1f	1b	-
28	1e	1g	-
29	1d	1c	-
30	ch	1a	-
31	-	COM2	-


AUTO . STEREO
FM123
SW12
AMW
LW
a
f
g
b
e
c
d
5
4
3
2
1
FM
MONO
MHz
KHz
CH

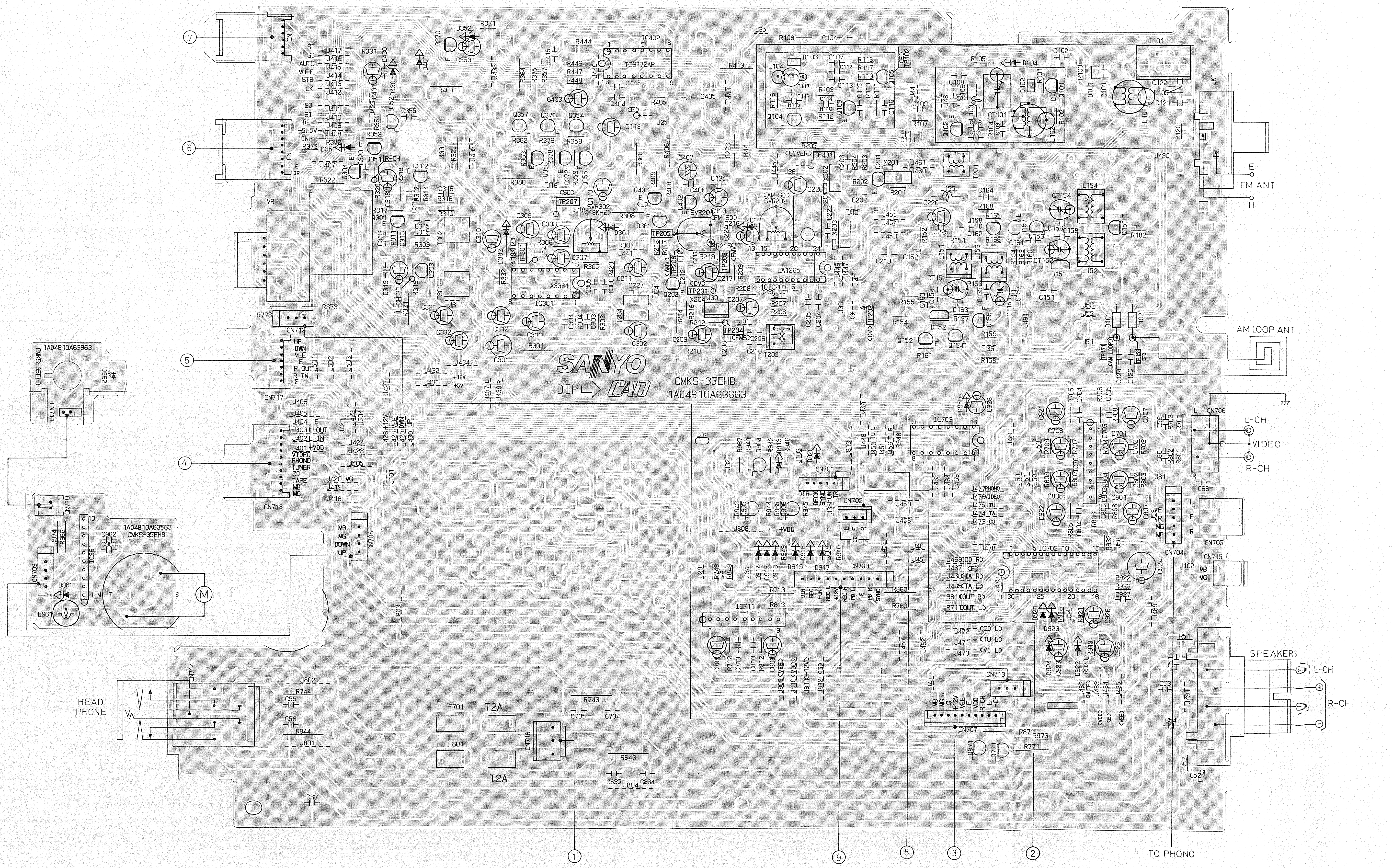
SCHEMATIC DIAGRAM (TUNER)


DC-X802/DE
(TUNER)
T101
BPF
L101
L102
L104
L105
Q101 2SK83R2
Q102 2SC1923Y
Q103 2SC1923Y
Q104 2SC1923Y
Q105 2SK83R2
T201
X201
X202
X203
X204
X205
Q201 2SC380TMO
T202
IC201 LA1265
Q151 2SC2878A
Q152 2SC2878A
Q153 2SC2878A
Q154 2SC2878A
Q155 2SC2878A
Q156 2SK301R
Q157 2SC1815GR
Q202 2SC1815GR
L151
L152
L153
L154
CT151
CT152
CT153
CT154
D151
D152
SVR201
SVR202
TP201
TP202
TP207 (SD)
T204
LPF
FM
ANT.
JK1
AM LOOP ANT
TP151
TP152
TP401
Q402 2SC2634R
Q403 2SC2634R
Q358 2SA1015GR
Q372 2SA1015GR
Q355 2SA1015GR
Q361 2SA1015GR
Q357 2SC1815GR
Q371 2SC1815GR
Q354 2SC1815GR
IC402 TC9172AP
IC301 LA3361
T301
T302
TRAP
SVR302
TP301
Q301 2SC1815GR
Q302 2SC1815GR
Q303 2SC2878A
Q304 2SC2878A
GND
ST
SD
AUTO
MUTE
STB
CK
SO
REF
INH
STK
CK
SO
5.6V
TO AMP SECTION
+12V
GND
R
L
TO AMP SECTION
Q351 2SA1015GR
Q352 2SC1815GR
Q370 2SA1015GR
D430 MTZ5.6B
D351
D352 MTZ9.1B
IC401
TC9306F045-BS
K3
K2
K1
K0
T6
T5
T4
T3
T2
T1
T0
SW AUTO
SW SCAN
SW B
SW A
FM PR 9/12
R. VR. SEL
MW B
MW A
LW B
VR SEL
FM B
FM A
PORY
MUTE1
MUTE2
BAND
-
F1
A/M
M. INC
DOWN
UP
M6
M5
M4
M3
M2
M1
VR. DOWN
VR. UP
DATA
D401
D402
D408
D409
D410
D411
S401 DOWN
S402 UP
S403 BAND
S404 A/M
S405 CH 1
S406 CH 2
S407 CH 3
S408 CH 4
S409 CH 5
S410 CH 6
STB
CK
SO
IR
S411
Q404 2SC1815GR
D431
TO AMP SECTION
VR.DOWN
VR.UP
GND
+B(DC12V)
IR DATA
CN404
CN403
CN402
CN401
A401
FM
SW
MW
LW
AUTO
MHZ
KHZ
ST
FM MONO
CH
D441
D442
D443
SLP880A
X401

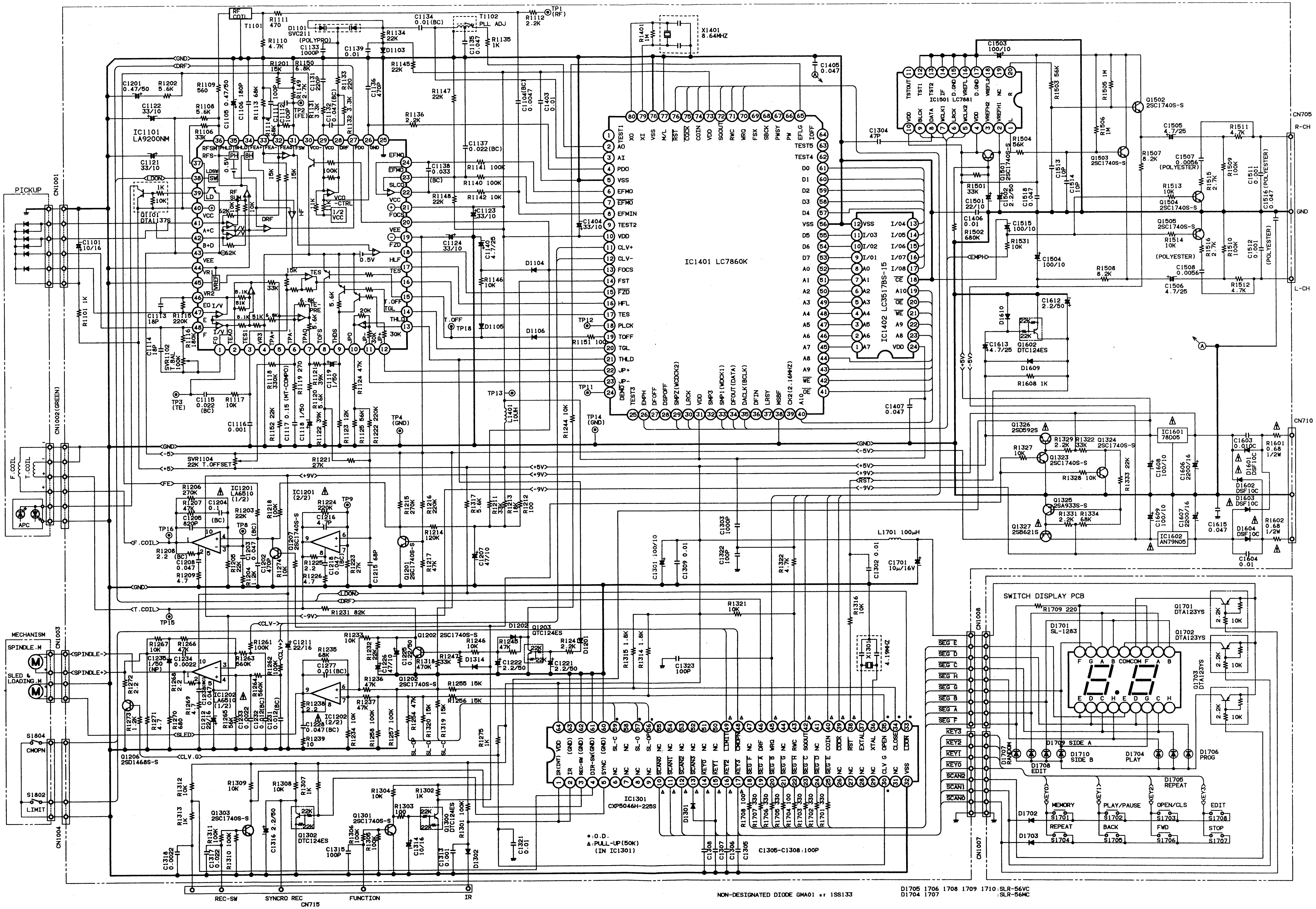
VOLTAGE $\frac{\text{FM=98MHZ}}{\text{MW=999KHZ}}$

D101.102.103 : SVC211B
D151.152 : SVC321C
D302.408-411 : DS442X OR EGV
OTHERS : GMA01 OR EGV

WIRING DIAGRAM (TUNER & PRE-AMP.)


⑦
⑥
⑤
④
①
⑨
⑧
③
②
ST
SD
AUTO
MUTE
STB
CK
SD
SI
REF
+5.5V
INH
IR
VR
UP
DWN
VEE
E
R OUT
R IN
L OUT
L IN
+VDD
VIDEO
PHONO
TUNER
CD
TAPE
MB
MG
MB
MG
DOWN
UP
1AD4B10A63963
CMKS-35EHB
1AD4B10A63563
CMKS-35EHB
M
IC402
TC9172AP
IC301
LA3361
LA1265
IC703
IC702
IC711
SANYO
DIP
CAD
CMKS-35EHB
1AD4B10A63663
T101
JK1
FM.ANT
E
H
AM LOOP ANT
L-CH
VIDEO
R-CH
SPEAKERS
L-CH
R-CH
TO PHONO
HEAD PHONE
F701
F801
T2A
T2A

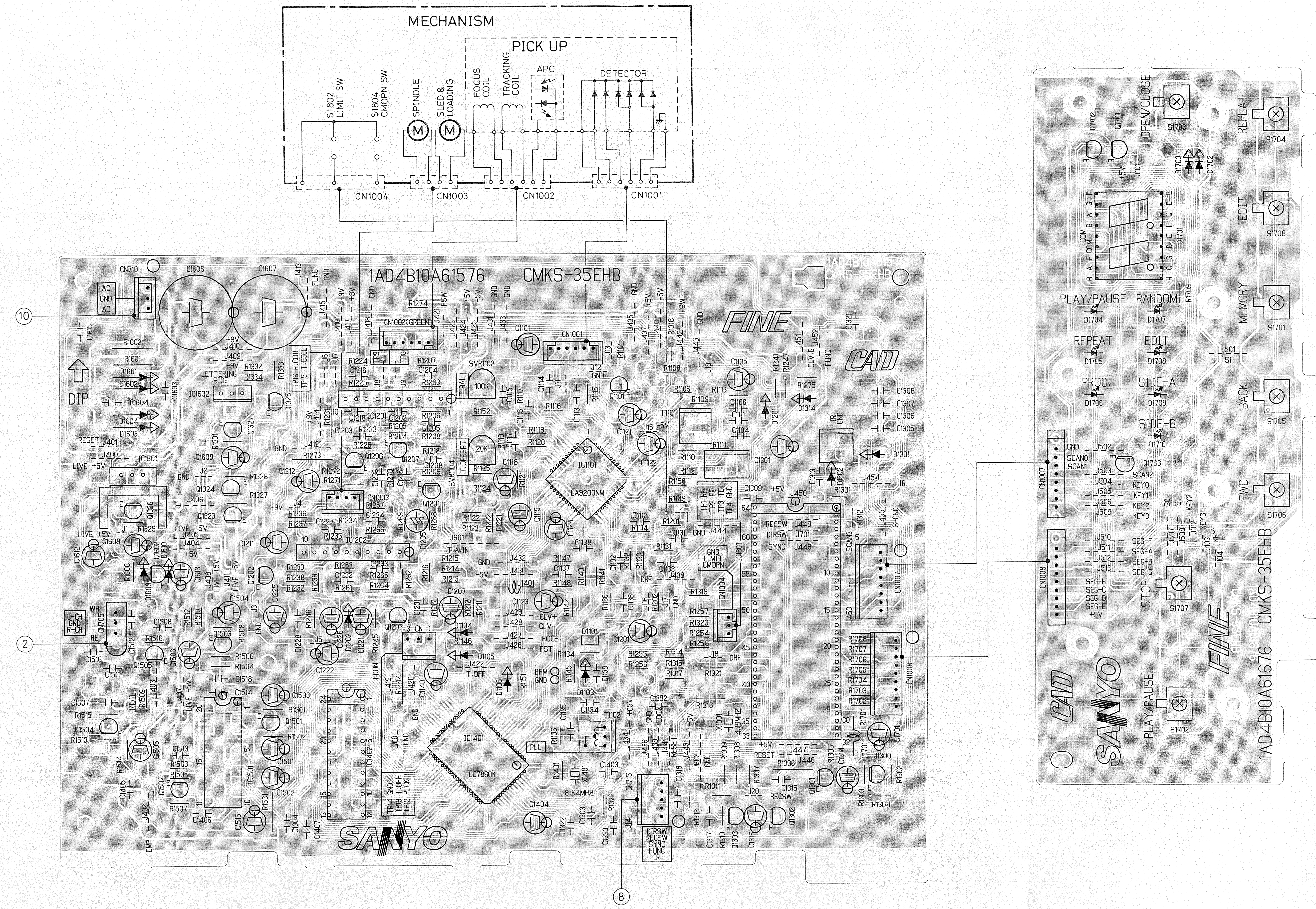
SCHEMATIC DIAGRAM (CD)


PICKUP
CN1001
IC1101 LA9200NM
RF COIL
T1101
T1102 PLL ADJ
D1101 SVC211
X1401 8.64MHZ
IC1401 LC7860K
IC1402 LC3517BS-15
IC1501 LC7881
CN705
R-CH
GND
L-CH
CN710
IC1601 78D05
IC1602 AN79N05
CN1002(GREEN)
F.COIL
T.COIL
APC
IC1201 LA6510 (1/2)
IC1201 (2/2)
SVR1104 22K T.OFFSET
MECHANISM
SPINDLE.M
SLED & LOADING.M
CN1003
IC1202 LA6510 (1/2)
IC1202 (2/2)
S1804 CMOPN
S1802 LIMIT
CN1004
IC1301 CXP5046H-225S
X1301 4.19MHZ
SWITCH DISPLAY PCB
D1701 SL-1283
CN1008
CN1007
MEMORY S1701
PLAY/PAUSE S1702
OPEN/CLS S1703
EDIT S1708
REPEAT S1704
BACK S1705
FWD S1706
STOP S1707
D1709 SIDE A
D1710 SIDE B
D1704 PLAY
D1706 PROG
D1705 REPEAT
D1708 EDIT
D1707 RANDOM
•:O.D.
▲:PULL-UP(50K) (IN IC1301)
C1305-C1308:100P
REC-SW
SYNCRO REC
FUNCTION
IR
CN715

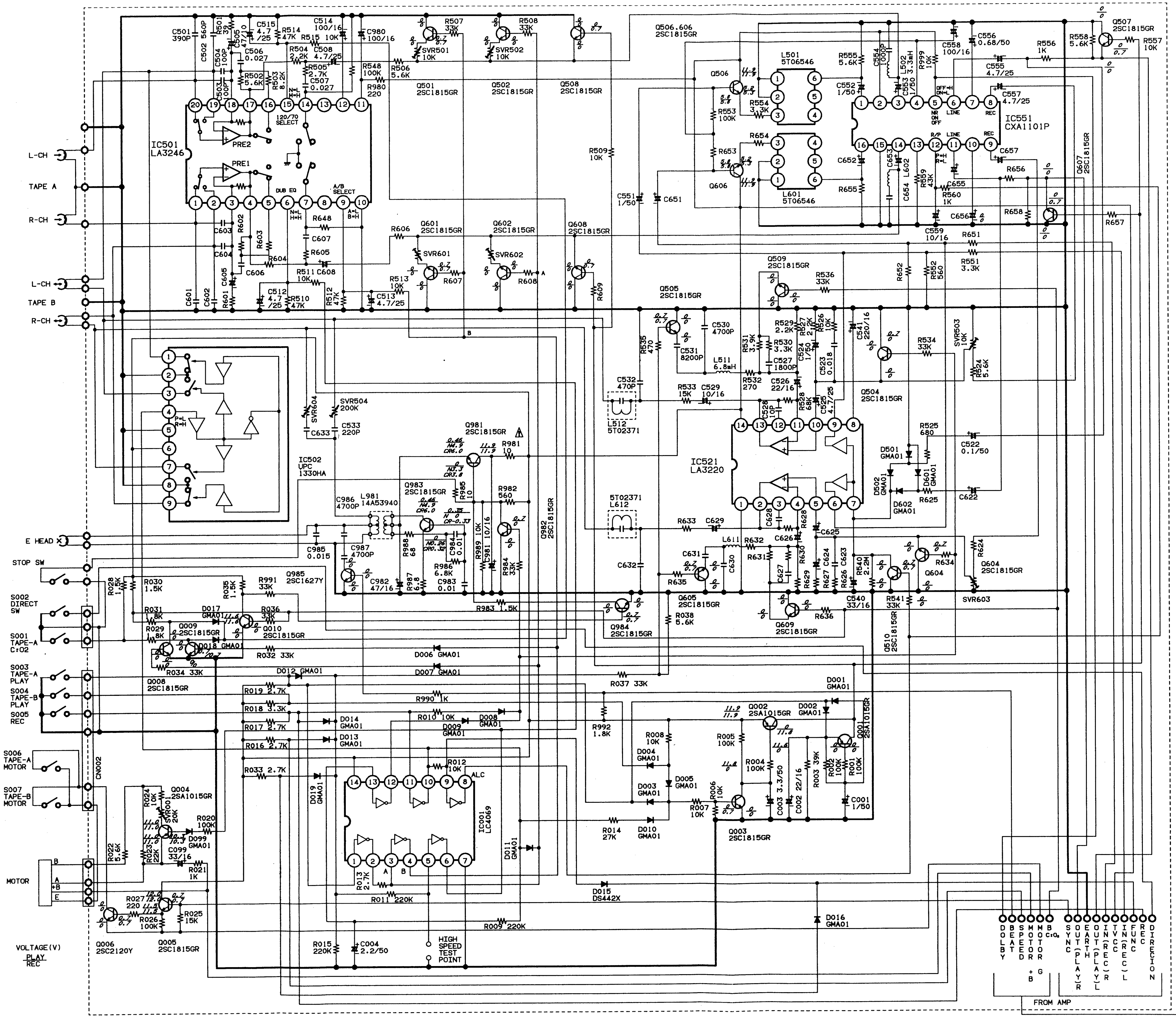
NON-DESIGNATED DIODE GMA01 or 1SS133

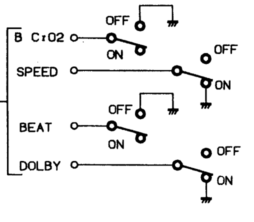
D1705 1706 1708 1709 1710:SLR-56VC
D1704 1707 :SLR-56MC

WIRING DIAGRAM (CD)


MECHANISM
PICK UP
S1802 LIMIT SW
S1804 CMOPN SW
SPINDLE
SLED & LOADING
FOCUS COIL
TRACKING COIL
APC
DETECTOR
CN1004
CN1003
CN1002
CN1001
1AD4B10A61576 CMKS-35EHB
FINE
CAD
SANYO
CN710
AC
GND
AC
C1606
C1607
DIP
RESET
LIVE +5V
LETTERING SIDE
TP16 F.COIL
TP15 T.COIL
CN1002(GREEN)
SVR1102
100K
T.BAL
T.OFFSET
20K
SVR1104
IC1101
LA9200NM
IC1201
IC1202
IC1401
LC7860K
IC1402
IC1501
IC1601
IC1602
IC1301
X1401
8.64MHz
X1301
4.19MHz
T1101
T1102
CN705
L-CH
GND
R-CH
WH
RE
TP14 GND
TP18 T.OFF
TP12 P.LCK
TP1 RF
TP2 FE
TP3 TE
TP4 GND
CN1004
GND
LIMIT
CMOPN
CN715
DIRSW
RECSW
SYNC
FUNC
IR
RECSW
DIRSW
SYNC
RESET
CN1007
CN1008
OPEN/CLOSE
S1703
REPEAT
S1704
EDIT
S1708
MEMORY
S1701
BACK
S1705
FWD
S1706
STOP
S1707
PLAY/PAUSE
S1702
PLAY/PAUSE
RANDOM
REPEAT
EDIT
PROG.
SIDE-A
SIDE-B
D1701
D1702
D1703
D1704
D1705
D1706
D1707
D1708
D1709
D1710
Q1701
Q1702
Q1703
GND
SCAN0
SCAN1
SCAN2
KEY0
KEY1
KEY2
KEY3
SEG-F
SEG-A
SEG-B
SEG-G
SEG-H
SEG-C
SEG-D
SEG-E
+5V
1AD4B10A61676 CMKS-35EHB
⑩
②
⑧

SCHEMATIC DIAGRAM (DECK)


IC501 LA3246
PRE1
PRE2
120/70 SELECT
DUB EQ
A/B SELECT
IC502 UPC1330HA
IC521 LA3220
IC551 CXA1101P
IC001 LC4069
ALC
L501 5T06546
L601 5T06546
L502
L512 5T02371
L612 5T02371
L981 14A53940
Q501 2SC1815GR
Q502 2SC1815GR
Q508 2SC1815GR
Q506.606 2SC1815GR
Q507 2SC1815GR
Q601 2SC1815GR
Q602 2SC1815GR
Q608 2SC1815GR
Q607 2SC1815GR
Q509 2SC1815GR
Q505 2SC1815GR
Q504 2SC1815GR
Q604 2SC1815GR
Q605 2SC1815GR
Q609 2SC1815GR
Q510 2SC1815GR
Q981 2SC1815GR
Q983 2SC1815GR
Q982 2SC1815GR
Q984 2SC1815GR
Q985 2SC1627Y
Q009 2SC1815GR
Q010 2SC1815GR
Q008 2SC1815GR
Q002 2SA1015GR
Q001 2SA1015GR
Q003 2SC1815GR
Q004 2SA1015GR
Q005 2SC1815GR
Q006 2SC2120Y
SVR501 10K
SVR502 10K
SVR601
SVR602
SVR503 10K
SVR504 200K
SVR604
SVR603
D017 GMA01
D018 GMA01
D006 GMA01
D007 GMA01
D012 GMA01
D014 GMA01
D013 GMA01
D009 GMA01
D008 GMA01
D019 GMA01
D011 GMA01
D099 GMA01
D001 GMA01
D002 GMA01
D003 GMA01
D004 GMA01
D005 GMA01
D010 GMA01
D015 DS442X
D016 GMA01
D501 GMA01
D502 GMA01
D601 GMA01
D602 GMA01
L-CH
TAPE A
R-CH
L-CH
TAPE B
R-CH
E HEAD
STOP SW
S002 DIRECT SW
S001 TAPE-A CrO2
S003 TAPE-A PLAY
S004 TAPE-B PLAY
S005 REC
S006 TAPE-A MOTOR
S007 TAPE-B MOTOR
CN002
MOTOR
B
A
+B
E
HIGH SPEED TEST POINT
VOLTAGE(V)
PLAY
REC
DOLBY
BEAT
SPEED
MOTOR
MOTOR
B CrO2
SYNC
EARTH
OUT(PLAY)R
OUT(PLAY)L
IN(REC)R
IN(REC)L
TV
FUNC
REC
DIRECTION
+B
G
FROM AMP


OFF
B CrO2
ON
OFF
SPEED
ON
OFF
BEAT
ON
OFF
DOLBY
ON

PLAY···TAPE B PLAY
REC ···TAPE B REC

IC501	VOLTAGE (V)		
	PLAY	REC	OTHER
1	0	0	
2	0	0	
3	0.59	0.59	
4	4.4	4.4	
5	4.4	4.4	
6	0	0	5.9(HI.DUB.)
7	0	0	
8	4.4	4.4	
9	5.9	5.9	0(TAPE A PLAY)
10	0	0	
11	9.7	9.7	
12	9.7	9.7	
13	4.4	4.4	
14	0	0	
15	0	0	5.9(CrO2)
16	4.4	4.4	
17	4.4	4.4	
18	0.59	0.59	
19	0	0	
20	0	0	

S001 TAPE A SELECT SW "CrO2"
S002 TAPE B SELECT SW "CrO2"
S003 TAPE A PLAY SW "OFF"
S004 TAPE B PLAY SW "OFF"
S005 TAPE B REC SW "OFF"
S006 TAPE A MOTOR SW "OFF"
S007 TAPE B MOTOR SW "OFF"

IC502	VOLTAGE(V)	
	PLAY	REC
1	0	0
2	0	0
3	0	0
4	0	11.6
5	0	0
6	11.9	11.9
7	0	0
8	0	0
9	0	0

IC521	VOLTAGE (V)		
	PLAY	REC	OTHER
1	0	0	
2	0.59	0.59	
3	11.2	11.2	
4	5.9	5.9	
5	5.9	5.9	
6	0	0	
7	0	0	1.15(ALC DOING)
8	5.9	5.9	
9	0	0	
10	5.9	5.9	
11	5.9	5.9	
12	11.2	11.2	
13	5.9	5.9	
14	11.9	11.9	

IC551	VOLTAGE (V)		
	PLAY	REC	OTHER
1	6.0	6.0	
2	11.9	11.9	
3	6.0	6.0	
4	6.0	6.0	
5	11.9	11.9	0(DOLBY ON)
6	6.1	6.1	
7	0.4	0.4	
8	6.1	6.1	
9	6.1	6.1	
10	0.4	0.4	
11	6.1	6.1	
12	11.8	0	0(FUNCTION SW NON TAPE REC)
13	1.2	1.2	
14	6.0	6.0	
15	0	0	
16	6.0	6.0	

COMMON USE

D001 002 003 004 005 006
007 008 009 010 011 012
013 014 016 017 018 019
501 601 502 602

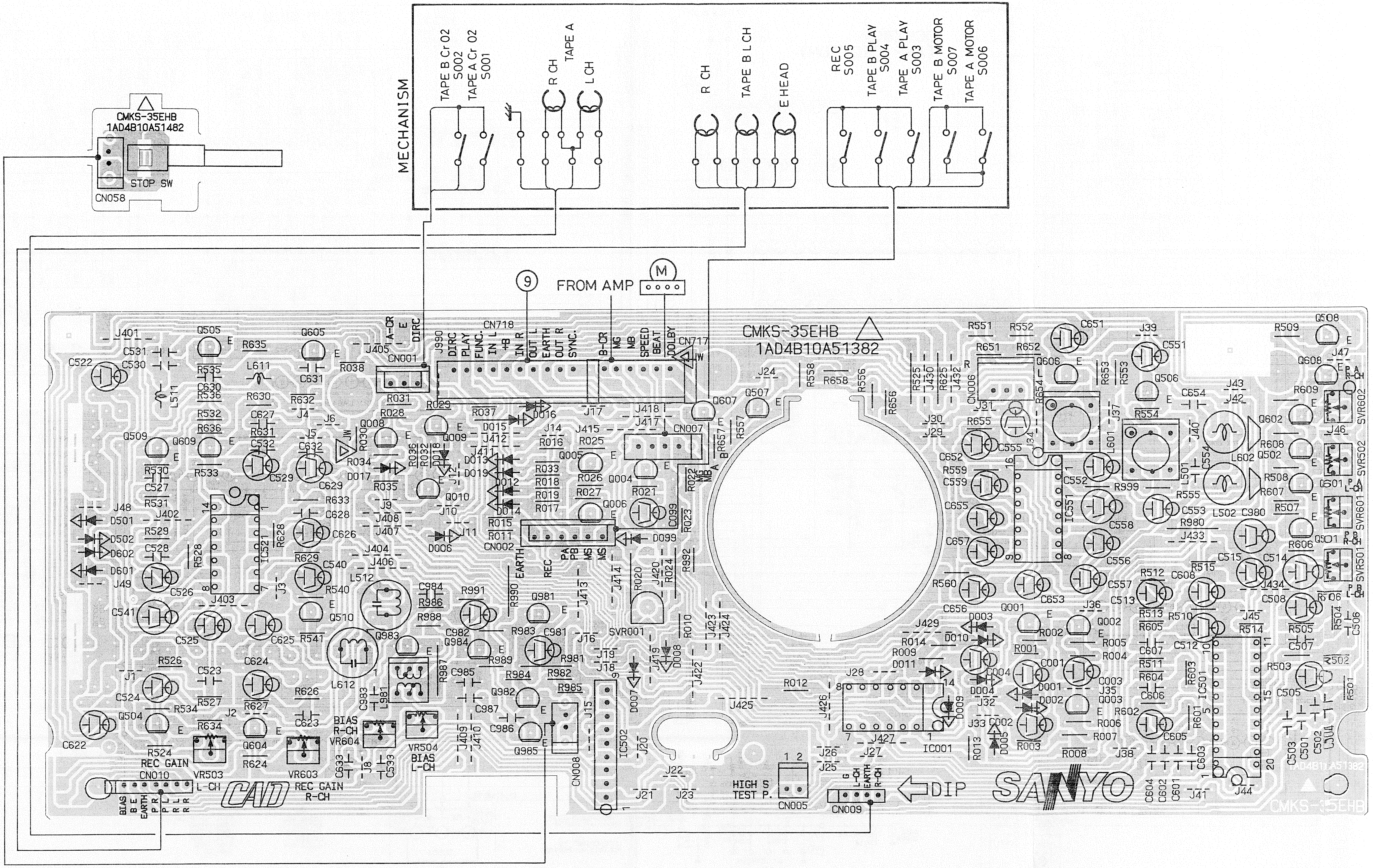
GMA01
(or1SS133)

D015
DS442X
(or1S2473)

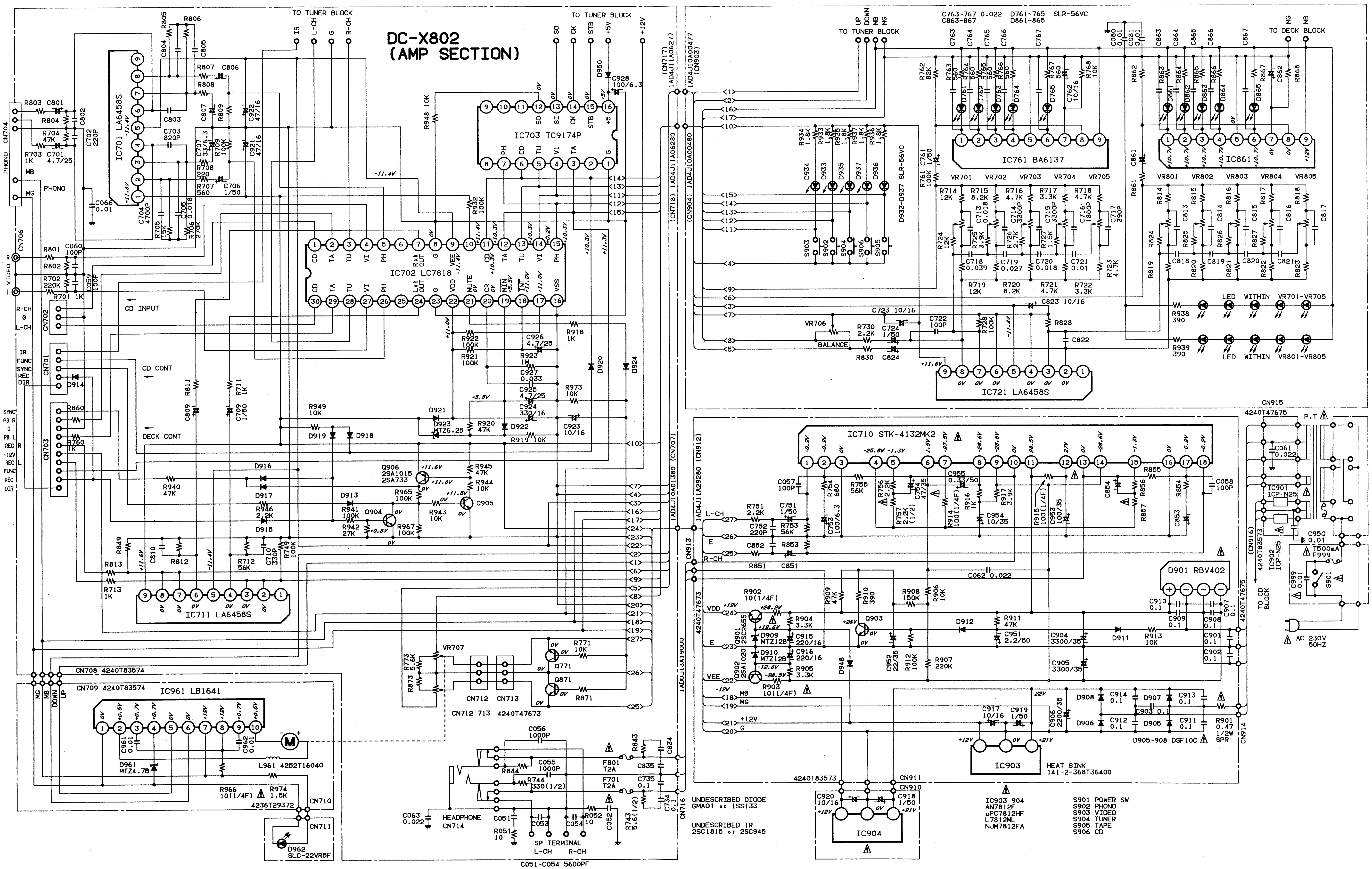
Q501 601 502 602 504 604
505 605 506 606 507 607
508 608 509 609 510 982
984 003 005 008 009 010
2SC1815GR
(or2SC945Kor2SC1740S)
Q981 983
2SC1815GR
(or2SC945K)
Q001 002 004
2SA1015GR
(or2SA733P)
Q006
2SC2120Y
(or2SC2001K)

IC001	VOLTAGE (V)			
	PLAY	REC	HI.DUB	NOR.DUB
1	11.3	11.2	0	0
2	0	0.35	12.0	12.0
3	0	10.4	11.0	11.0
4	11.8	0	0	0
5	10.7	10.5	0.4	9.6
6	0	0	11.9	0
7	0	0	0	0
8	12.0	0	12.0	12.0
9	0	11.1	0.6	0.6
10	0	11.1	11.6	11.6
11	11.5	0	0	0
12	11.9	0	0	0
13	0	10.8	11.4	11.4
14	12.0	12.0	12.0	12.0

WIRING DIAGRAM (DECK)


MECHANISM
TAPE B Cr 02
S002
TAPE A Cr 02
S001
R CH
TAPE A
L CH
R CH
TAPE B L CH
E HEAD
REC
S005
TAPE B PLAY
S004
TAPE A PLAY
S003
TAPE B MOTOR
S007
TAPE A MOTOR
S006
CMKS-35EHB
1AD4B10A51482
STOP SW
CN058
9
FROM AMP
M
CMKS-35EHB
1AD4B10A51382
CN718
CN717
CN001
A-CR
E
DIRC
J990
DIRC
PLAY
FUNC.
IN L
+B
IN R
OUT L
EARTH
OUT R
SYNC.
B-CR
MG
MB
SPEED
BEAT
DOLBY
CN002
EARTH
REC
PA
PB
MS
MS
CN006
CN007
IC521
IC551
IC501
IC502
IC001
CN008
REC GAIN
CN010
VR503
L-CH
VR603
REC GAIN
R-CH
BIAS
R-CH
VR604
VR504
BIAS
L-CH
BIAS
B E
EARTH
P L
R L
L R
R R
HIGH S
TEST P.
CN005
G
L-CH
EARTH
R-CH
CN009
DIP
SANYO
SVR602
SVR502
SVR601
SVR501
CMKS-35EHB

SCHEMATIC DIAGRAM (FRONT & MAIN-AMP.)


DC-X802
(AMP SECTION)
TO TUNER BLOCK
IR
L-CH
G
R-CH
SO
CK
STB
+5V
+12V
IC701 LA6458S
IC702 LC7818
IC703 TC9174P
IC711 LA6458S
IC721 LA6458S
IC761 BA6137
IC861
IC961 LB1641
IC710 STK-4132MK2
D901 RBV402
IC903
IC904
PHONO
CN704
CN706
VIDEO
CN702
CN701
CN703
CD INPUT
CD CONT
DECK CONT
IR
FUNC
SYNC
REC
DIR
SYNC
PB R
G
PB L
REC R
+12V
REC L
FUNC
REC
DIR
MB
MG
UP
DOWN
CN708 4240T83574
CN709 4240T83574
CN710
CN711
4236T29372
D962
SLC-22VR5F
D961
MTZ4.7B
L961 4252T16040
R966
10(1/4F)
R974
1.5K
CN712
CN713
CN712 713 4240T47673
VR707
Q771
Q871
Q906
2SA1015
2SA733
Q904
Q905
Q901
2SC2655
Q902
2SA1020
Q903
HEADPHONE
CN714
SP TERMINAL
L-CH
R-CH
C051-C054 5600PF
F801
T2A
F701
T2A
CN716
TO TUNER BLOCK
UP
DOWN
MB
MG
TO DECK BLOCK
C763-767 0.022
C863-867
D761-765 SLR-56VC
D861-865
D933-D937 SLR-56VC
VR701
VR702
VR703
VR704
VR705
VR801
VR802
VR803
VR804
VR805
VR706
BALANCE
LED WITHIN VR701-VR705
LED WITHIN VR801-VR805
S903
S902
S904
S906
S905
CN915
4240T47675
P.T
IC901 ICP-N25
IC902 ICP-N25
T500mA
F999
S901
AC 230V
50HZ
TO CD BLOCK
4240T47675
4240T83573
CN911
CN910
CN912
CN913
CN914
CN916
CN707
CN717
1AD4J11A06277
CN903
1AD4J10A00477
CN718
1AD4J11A06280
CN904
1AD4J10A00480
1AD4J10A01380
1AD4J11A29280
4240T47673
1AD0J13A19000
D905-908 DSF10C
HEAT SINK
141-2-368T36400
R901
0.47
1/2W
SPR
VDD
VEE
E
L-CH
R-CH
+12V
G
MB
MG

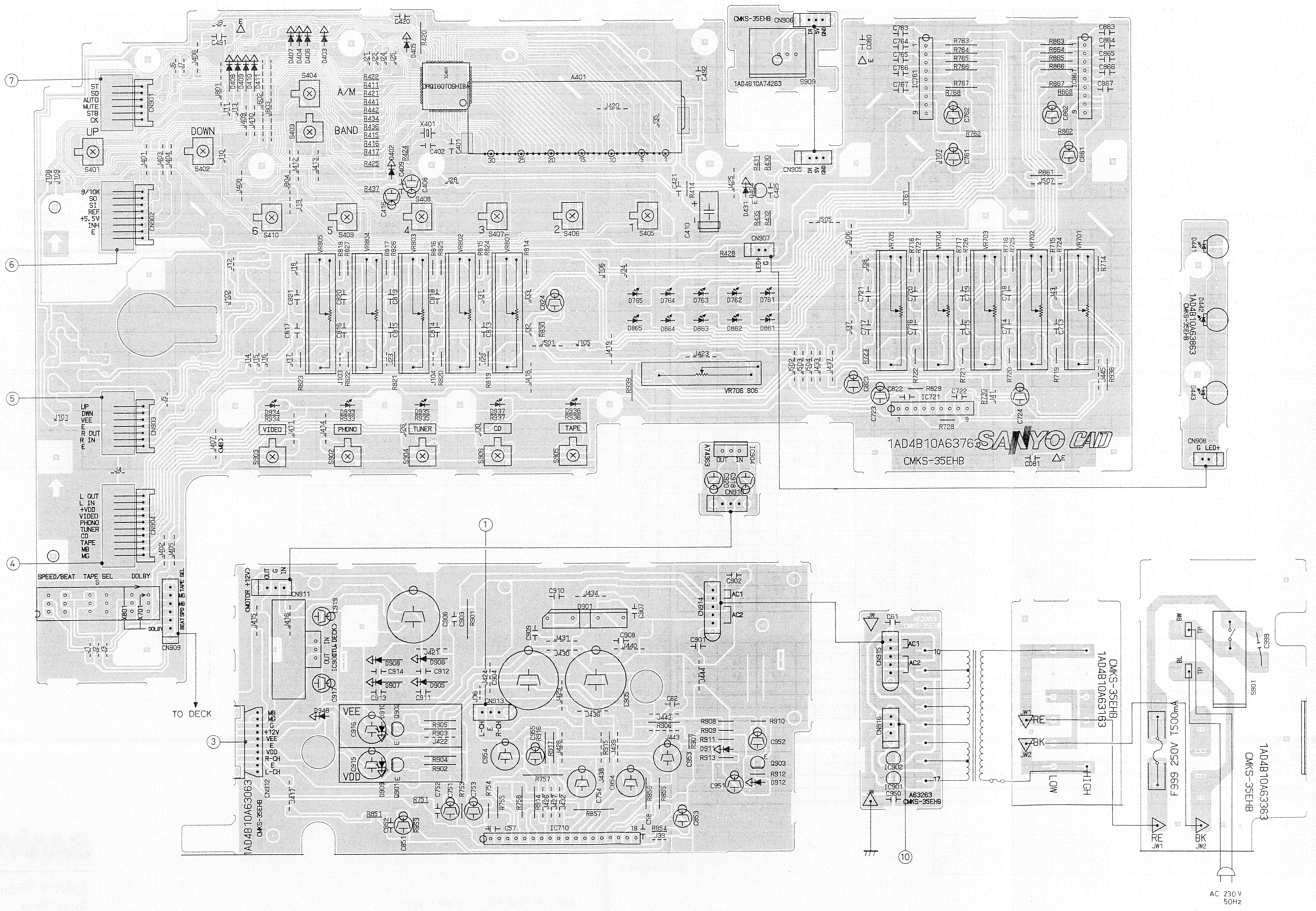
UNDESCRIBED DIODE
GMA01 or 1SS133

UNDESCRIBED TR
2SC1815 or 2SC945

IC903 904
AN7812F
μPC7812HF
L7812ML
NJM7812FA

S901 POWER SW
S902 PHONO
S903 VIDEO
S904 TUNER
S905 TAPE
S906 CD

WIRING DIAGRAM (FRONT & MAIN-AMP.)



CMKS-35EHB
CN906
1AD4B10A74263
S909
CN905
IR
5V
GND
ST
SD
AUTO
MUTE
STB
CK
CN901
UP
S401
DOWN
S402
A/M
S404
BAND
S403
9/10K
SO
SI
REF
+5.5V
INH
E
CN902
S410
S409
S408
S407
S406
S405
1
2
3
4
5
6
A401
IC401
X401
VR805
VR804
VR803
VR802
VR801
VR705
VR704
VR703
VR702
VR701
VR706 806
CN907
LED+
G
D765
D764
D763
D762
D761
D865
D864
D863
D862
D861
IC761
IC861
IC721
UP
DWN
VEE
E
R OUT
R IN
E
CN903
L OUT
L IN
+VDD
VIDEO
PHONO
TUNER
CD
TAPE
MB
MG
CN904
VIDEO
PHONO
TUNER
CD
TAPE
S903
S902
S904
S906
S905
1AD4B10A63763
SANYO CAD
CMKS-35EHB
CN908
G LED+
D441
D442
D443
1AD4B10A63863
CMKS-35EHB
IC904
OUT IN
CN910
SPEED/BEAT
TAPE SEL
DOLBY
X801
X701
CN909
BEAT SPD MB MG TAPE SEL
TO DECK
①
③
④
⑤
⑥
⑦
⑩
(MOTOR +12V)
OUT
G
IN
CN911
IC903 (TA DECK)
OUT IN
VEE
VDD
MB
MG
G
+12V
VEE
E
VDD
R-CH
E
L-CH
CN312
1AD4B10A63063
CMKS-35EHB
CN913
L-CH
E
R-CH
IC710
CN914
AC1
AC2
CN915
CN916
IC902
IC901
A63263
CMKS-35EHB
10
17
CMKS-35EHB
1AD4B10A63163
RE
BK
JW1
JW2
LOW
HIGH
F999 250V T500mA
BW
BL
TP
S99
LOSS
1AD4B10A63363
CMKS-35EHB
RE
BK
JW1
JW2
AC 230V
50Hz

VOLTAGES OF IC & TRANSISTOR

IC1101 LA9200NM

(Unit : Volt)

Measuring Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Stop Mode	0		0.3	0	0	0	0	0	0	0	0	0	0	4.8	4.3	4.1
Play Mode	-0.3	Flun	0.2	0											0	3.8
Measuring Pin No.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Stop Mode	4.1	4.0	-5.0	0	4.9	3.6	1.5	1.5	0	2.4	0	2.4	2.4	0	0	0.6
Play Mode	0	4.0	-5.0	0	4.9	2.5	2.6	2.4	0	2.4	4.16	2.5	2.4	Fluc	-0.3	0.3
Measuring Pin No.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Stop Mode	0.6	0.2	-0.2	-0.1	0	4.2	4.9	5.0	0	0	-5.0	0	0	0	0	0
Play Mode	0.3	0.8	2.9	1.7		0.3	-5.0	5.0			-5.0					

IC1202·1202 LC6510

Measuring Pin No.	1	2	3	4	5	6	7	8	9	10
Stop Mode	Fluc	Fluc	Fluc	Fluc	-9.8	Fluc	Fluc	Fluc	Fluc	9.7
Play Mode	0	0	0	0	-9.8	0	0	0.3	0.3	9.7

IC1301 CXP5046H-225S

Measuring Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Stop Mode	4.9	4.9	4.9	4.9	4.9	-	-	-	-	2	2	2	4.9	4.9	4.9	4.9
Play Mode	4.9	4.9	4.9	4.9	0.3	-	-	-	-	2	2	2	4.9	4.9	4.9	4.9
Measuring Pin No.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Stop Mode	4.9	0.3	0.3	0.3	0.3	0.5	0.3	0.3	0.3	-	-	-	-	3.0	-	0
Play Mode	4.9	0.3	0.3	0.3	0.3	0.5	0.3	0.3	0.3	-	-	-	-	3.0	-	0
Measuring Pin No.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Stop Mode	4.5	0.2	0.2	-	-	4.9	4.9	0	-	4.6	0	-	4.7	0	-	4.9
Play Mode	0.1	4.8	4.8	-	-	4.9	4.9	0	-	Fluc	0	-	Fluc	4	-	0
Measuring Pin No.	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Stop Mode	4.9	-	-	-	-	-	-	0.1	0	-	0	0	0	0	0	4.9
Play Mode	0	-	-	-	-	-	-	3.2	3.2	-	3	0	0	0	0	4.9

IC1401 LC7860K

Measuring Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Stop Mode		2.5	2.4	2.4	0	1.4	1.2	2.5	0	4.9				3.0	4.2	4.2
Play Mode		2.5	2.4	2.4	0	2.4	2.4	2.5	0	4.9	0.8	0	0	3.0	4.2	0
Measuring Pin No.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Stop Mode		2.5	4.86	0	0	0	0	0	0	0	0	0	1.0	2.5	4.9	2.0
Play Mode	4.17	2.5	4.86										1.0	2.5	4.9	2.0
Measuring Pin No.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Stop Mode	1.0	2.0	2.4		2.4	0	2.4	2.4	3.57	4.5	2.4	2.4	2.4	2.4	2.4	2.4
Play Mode	1.0	2.3	2.4		2.4	0	2.4	2.4	3.57	4.5	2.4	2.4	2.4	2.4	2.4	2.4
Measuring Pin No.	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Stop Mode	1.6	1.6	1.6	1.6	1.4	1.4	1.4	0	3.6	3.6	3.6	1.6	3.6			
Play Mode	1.6	1.6	1.6	1.6	2.6	2.6	2.6	0	2.4	2.4	2.4	2.4	2.4			
Measuring Pin No.	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Stop Mode	2.3		0.3		2.4	0			4.9		4.9	5.0	0	0	2.3	2.3
Play Mode	Fluc		0.3	Fluc	2.4	0.2	Fluc	Fluc	4.9	Fluc	4.9	5.0	0		2.3	2.3

IC1402 LC3517BS-15

Measuring Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Stop Mode	2.4	2.4	2.4	2.4	1.6	1.6	1.6	1.6	2.5	1.4	1.4	0	3.6	3.6	3.6	1.7
Play Mode										2.2	2.5		2.6	2.6	2.6	2.4
Measuring Pin No.	17	18	19	20	21	22	23	24								
Stop Mode	3.6	0	2.4	3.5	4.5	2.5	2.5	4.9								
Play Mode	2.3		2.4	3.5												

IC1501 LC7881-C

Measuring Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Stop Mode	2.0	4.0		5.0	1.0	2.5	1.0	0	2.3	5.0		0	0	0	0	0
Measuring Pin No.	17	18	19	20												
Stop Mode	0			2.0												

IC1502 LC6458DS

Measuring Pin No.	1	2	3	4	5	6	7	8
Stop Mode	Fluc	Fluc	Fluc	-5.0	Fluc	Fluc	Fluc	5.0
Play Mode								

Fluc : Fluctuetion

VOLTAGES OF IC & TRANSISTOR

TRANSISTOR

(Unit : Volt)

Transistor No.	Q1101			Q1201			Q1202			Q1203		
Measuring Pin Name	E	C	B	E	C	B	E	C	B	E	C	B
Stop Mode	4.98	0.5	4.98	0	0.3	-0.6	0	0	0.6	0	2.2	0
Play Mode		4.86	-4.98									
Transistor No.	Q1206			Q1207								
Measuring Pin Name	E	C	B	E	C	B						
Stop Mode	0	0	0.6	0	0	0.6						
Play Mode				0	0.3	-0.7						
Transistor No.	Q1300			Q1301			Q1302			Q1303		
Measuring Pin Name	E	C	B	E	C	B	E	C	B	E	C	B
Voltages	0	0.3/5	4/0.3	0	4/0.3	0/0.7	0	5/0.3	0/5	0	5/0.3	0/0.7
Transistor No.	Q1323			Q1324			Q1325			Q1326		
Measuring Pin Name	E	C	B	E	C	B	E	C	B	E	C	B
Stop Mode	0	5.6	0	0	4.2	0	0	-5.6	0.7	4.9	4.9	5.6
Play Mode												
Transistor No.	Q1327			Q1501			Q1503			Q1504		
Measuring Pin Name	E	C	B	E	C	B	E	C	B	E	C	B
Stop Mode	.5.0	-5.0	-5.6	4.0	4.9	4.7	0	0	0	0	0	0
Play Mode							0	0	2.0	0	0	2.0
Transistor No.	Q1505			Q1506			Q1601			Q1602		
Measuring Pin Name	E	C	B	E	C	B	E	C	B	E	C	B
Stop Mode	0	0	4.2	0	0	4.2	5.0	-3.0	5.0	0	5.0	0
Play Mode	0	0	-5.0	0	0	-5.0						
Transistor No.	Q1603											
Measuring Pin Name	E	C	B									
Stop Mode	0	4.3	0									
Play Mode	0	-5.0	4.3									

SANYO

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